

ThinkStation P720 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification						
Form factor	36L Tower						
Dimensions	175mm/6.89" W x 485mm/19.1" D x 446mm/17.6" H (with feet)						
Weight	Maximum configuration: 52.25 lb (23.7kg)						
Processor	Up to two 150W Intel Xeon Scalable family processors, Bronze, Silver, Gold, or Platinum. Up to 26 cores at 2.0GHz, up to 3.6GHz with 4 cores. Two processors are connected with two UPI (Ultra Path Interconnect) links up to 10.4GT/s						
Chipset	Intel C621 Chipset						
Memory	Up to 12 DIMM sockets. Each processor supports up to 6 DIMM sockets with 6 channels. RDIMMs. DDR4-2666						
Memory capacity	Up to 384GB with 12 x 32GB RDIMMs and two processors						
Memory protection	ECC						
Expansion slots	Slot 1 (CPU2)	PCIe 3.0 x16, full height, full length, 75W					
	Slot 2 (CPU1)	PCIe 3.0 x16, full height, full length, 75W, double-width					
	Slot 3 (CPU1)	PCIe 3.0 x8, full height, full length, 25W, open ended					
	Slot 4 (CPU1)	PCIe 3.0 x16, full height, full length, 75W, double-width					
	Slot 5	PCI, full height, full length, 25W					
	Slot 6 (PCH)	PCIe 3.0 x4, full height, half length, 25W, open ended					
Up to three PCIe 3.0 x16 slots depending on the processors installed (see Expansion slots section). Up to one NVIDIA Quadro P6000, or up to two Quadro P5000, Quadro P4000, or NVS 810, other graphics adapters under 75W up to 3, 900W PSU is needed. Supports the following graphics adapters:							
Graphics	Adapter	Cores	Memory	Power	Connector	SLI	
	NVS 310	48	1GB DDR3	19.5W	2xDP		
	NVS 315	48	1GB DDR3	19.3W	2x DVI-I SL, 2x DP		
	NVS 510	192	2GB DDR3	33.4W	4xmini DP		
	NVS 810	1024	4GB DDR3	68W	8xmini DP		
	Quadro P400	256	2GB GDDR5	30W	3xminiDP		
	Quadro P600	384	2GB GDDR5	45W	4xminiDP		
	Quadro P620	512	2GB GDDR5	40W	4x miniDP		
	Quadro P1000	640	4GB GDDR5	50W	4xminiDP		
	Quadro P2000	1024	5GB GDDR5	75W	4xDP		
	Quadro P4000	1792	8GB GDDR5	120W	4xDP		
	Quadro P5000	2560	16GB GDDR5X	180W	DVI-D DL+4xDP	SLI	
	Quadro P6000	3840	24GB GDDR5X	250W	DVI-D DL+4xDP	SLI	
	Quadro GP100	3584	16GB HBM2	235W	1xDVI-D DL, 4xDP	NVLink	
	Quadro GV100	5120	32GB HBM2	250W	4xDP	NVLink	
	Tesla M60	4096	16GB GDDR5	300W			
	Geforce GTX 1060	1280	6GB GDDR5	120W	DVI-D DL, HDMI, 3x DP		
	Geforce GTX 1070	1920	8GB GDDR5	150W	DVI-D DL, HDMI, 3x DP		
	Geforce GTX 1080	2560	8GB GDDR5X	180W	DVI-D DL, HDMI, 3x DP		
	Radeon Pro WX4100	1024	4GB GDDR5	50W	4x miniDP		
	Radeon Pro WX5100	1792	8GB GDDR5	75W	4x DP		
	Radeon Pro WX7100	2304	8GB GDDR5	130W	4x DP		
	Notes: Parts in red text are SBO.						
	Storage controllers	Integrated Intel SATA AHCI/RAID controller in chipset, 6Gbps SATA, RAID 0/1/10/5. Integrated Intel PCIe host in processor for M.2 PCIe NVMe drives, optional RAID 0/1/10 with Intel NVMe RAID upgrade basic, optional RAID 0/1/10/5 with Intel NVMe RAID upgrade premium.					
Optional Broadcom 9440-8i, PCIe adapter, 12Gbps, SATA/SAS, RAID 0/1/10/5. Or optional Broadcom 9460-16i with 4GB DDR4 memory and SuperCap, PCIe adapter, 12Gbps, SATA/SAS, RAID 0/1/10/5/6							
5.25" flex bay	Two 5.25" flex bays, supports the following options:						
	- Up to two half-height optical drives. - Up to two 5.25" slim ODD cages, each supports one 9.0mm optical drive. - Up to one 5.25" slim ODD and HDD cage for one 9.0mm optical drive plus one 3.5" or 2.5" SATA disk. - Up to one Front Access Storage Enclosure for one 3.5" or 2.5" SATA disk - Up to one flex module for one or more of the following options: 9.0mm optical/ 15-in-1 USB 3.0 reader/front eSATA/front Thunderbolt/front USB 3.0 Type-C/ 4-digit diagnostic display - Up to two Front Removable Drive Enclosure, supports one M.2 SSD each. Each Front Removable Drive Enclosure comes with a PCIe x4 adapter						
Note:							
1. Only one can be supported from 15-in-1 reader, Thunderbolt, and 4-digit display							
2. Up to two ports are supported from 1394, eSATA, and USB Type-C							

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Disk drive bays	Up to four internal 3.5" drive bays. Two standard, two optional. Each bay supports one 3.5" or 2.5" disk. Selected models supports four internal 3.5" dual drive bays, each bay supports one 3.5" HDD plus one 2.5" SATA SSD, or two 2.5" SATA SSD. Supports up to four 2.5" U.2 SSD on selected models. Up to two 2.5" or 3.5" SATA disk drives on 5.25" flex bays via one 5.25" Front Access Storage Enclosure plus one 5.25" slim ODD and HDD cage																									
M.2 slots	Up to 9 x M.2 PCIe NVMe SSD: • Two onboard M.2 slots. • Up to one full height, full length PCIe 3.0 x16 adapter with four M.2 slots. • Up to three PCIe 3.0 x4 adapters, each adapter supports one M.2 slot <i>Note: Supports RAID 0/1 on onboard M.2 disks and RAID 0/1/10/5 on quad M.2 PCIe x16 adapter, NVMe RAID upgrade is needed</i>																									
Internal storage	<table><tr><td>HDD 7.2K 3.5" SATA6Gbps</td><td>1TB/2TB/4TB/6TB</td></tr><tr><td>HDD 7.2K 2.5" SATA6Gbps</td><td>500GB FIPS</td></tr><tr><td>SSD 2.5" SATA6Gbps</td><td>256GB Opal/512GB/512GB Opal/1TB Opal/2TB Opal</td></tr><tr><td>M.2 PCIe NVMe, PCIe 3.0 x4</td><td>256GB Opal/512GB Opal/1TB Opal</td></tr></table>	HDD 7.2K 3.5" SATA6Gbps	1TB/2TB/4TB/6TB	HDD 7.2K 2.5" SATA6Gbps	500GB FIPS	SSD 2.5" SATA6Gbps	256GB Opal/512GB/512GB Opal/1TB Opal/2TB Opal	M.2 PCIe NVMe, PCIe 3.0 x4	256GB Opal/512GB Opal/1TB Opal																	
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Media reader	9-in-1 USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.0 reader on flex module																									
Network interfaces	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN on both two ports. Optional PCIe ethernet or wireless adapters are available																									
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Chassis intrusion switch. Optional access panel lock, Kensington lock, and pad lock																									
Systems management	Intel Active Management Technology 11. Front panel warning LED. ThinkStation Diagnostics for Windows. Photo-audio transfer with Lenovo PC Diagnostics for Android and iOS. Optional front 4-digit diagnostic display on flex module																									
Base warranty	1 or 3-year limited onsite service with 9x5/NBD																									
HD Audio	Realtek ALC662 codec																									
Front ports	Four USB 3.0 (includes one 11W charging), one combo audio/microphone jack (3.5mm)																									
Rear ports	Two USB 2.0, four USB 3.0, two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in), two PS/2																									
Optional ports	Supports the following optional ports: • Optional COM port • Two USB Type-C ports via PCIe adapter, USB 3.1 gen 2. One 15W, one 5W • Two Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out. • One eSATA on flex module • One internal USB 3.0 port																									
Power supply	One fixed 690W or 900W, autosensing, 92%, 80 PLUS Platinum qualified.900W PSU supports two 6+2-pin aux power connectors. 690W PSU supports one 6+2-pin aux power connector.																									
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>	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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	<table><tr><th>Model</th><th>30BA0007US</th><th>30BA0008US</th></tr><tr><td>Processor</td><td>2 x Intel Xeon Silver 4110</td><td>2 x Intel Xeon Gold 5122</td></tr><tr><td>Memory</td><td>2 x 8GB RDIMM DDR4-2666 ECC</td><td>2 x 8GB RDIMM DDR4-2666 ECC</td></tr><tr><td>Disks</td><td>2x1TB HDD 7.2K 3.5" SATA6Gbps</td><td>2 x 256GB SSD 2.5" SATA6Gbps Opal</td></tr><tr><td>Graphics</td><td>NVIDIA Quadro P4000 8GB</td><td>NVIDIA Quadro P4000 8GB</td></tr><tr><td>Optical</td><td>HH DVD±RW</td><td>HH DVD±RW</td></tr><tr><td>PSU</td><td>690W</td><td>900W</td></tr><tr><td>OS</td><td>Win10 Pro 64</td><td>Win10 Pro 64</td></tr></table>	Model	30BA0007US	30BA0008US	Processor	2 x Intel Xeon Silver 4110	2 x Intel Xeon Gold 5122	Memory	2 x 8GB RDIMM DDR4-2666 ECC	2 x 8GB RDIMM DDR4-2666 ECC	Disks	2x1TB HDD 7.2K 3.5" SATA6Gbps	2 x 256GB SSD 2.5" SATA6Gbps Opal	Graphics	NVIDIA Quadro P4000 8GB	NVIDIA Quadro P4000 8GB	Optical	HH DVD±RW	HH DVD±RW	PSU	690W	900W	OS	Win10 Pro 64	Win10 Pro 64	
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ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/																									