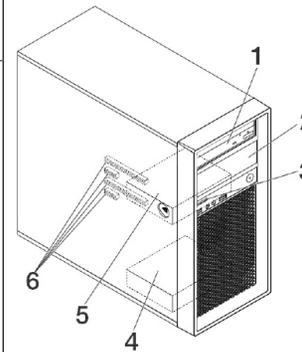


# ThinkStation P310 Tower Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification																																																		
Chipset	Intel C236 Chipset																																																		
Intel AMT	Intel Active Management Technology 11 supported on Xeon models																																																		
Processor	One LGA1151 socket, supports one the following processors:																																																		
	Xeon E3-1280 v5	4C/3.7GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1275 v5	4C/3.6GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1270 v5	4C/3.6GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1245 v5	4C/3.5GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1240 v5	4C/3.5GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1230 v5	4C/3.4GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1225 v5	4C/3.3GHz/8MB/80W/DDR4-2133																																																	
	Xeon E3-1220 v5	4C/3GHz/8MB/80W/DDR4-2133																																																	
	Core i7-6700	4C/3.4GHz/8MB/65W/DDR4-2133																																																	
	Core i5-6600	4C/3.3GHz/6MB/65W/DDR4-2133																																																	
	Core i5-6500	4C/3.2GHz/6MB/65W/DDR4-2133																																																	
	Core i5-6400	4C/2.7GHz/6MB/65W/DDR4-2133																																																	
	Core i3-6320	2C/3.9GHz/4MB/51W/DDR4-2133																																																	
Core i3-6300	2C/3.8GHz/4MB/51W/DDR4-2133																																																		
Core i3-6100	2C/3.7GHz/3MB/51W/DDR4-2133																																																		
Memory DIMM slots	4 DIMM slots, 2-channel (integrated memory controller in processor)																																																		
Memory type/capacity	Up to 64GB ECC/non-ECC (4 x 16GB), DDR4-2133, UDIMM																																																		
Intel HD Graphics in processor	Integrated Intel HD P530 in Xeon E3-12x5 v5 processors; or Intel HD 530 in Core i7, i5, or i3 processors. Works along with discrete graphics to support multi-display, enables three display connectors (2 DP, 1 VGA) on rear. Max resolution: 4096 x 2304																																																		
Discrete graphics	Two PCI Express 3.0 x16 slots for graphics adapters. Up to two Quadro K1200 on 250 watts models. Or up to two Quadro K2200, or up to one Quadro M4000 on 400 watts models. Supports the following NVIDIA graphics adapters:																																																		
	<table border="1"> <thead> <tr> <th>Adapter</th> <th>Cores</th> <th>Memory</th> <th>Power</th> <th>Connector</th> </tr> </thead> <tbody> <tr> <td>NVS 310</td> <td>48</td> <td>1GB</td> <td>19.5W</td> <td>2xDP</td> </tr> <tr> <td>NVS 315</td> <td>48</td> <td>1GB</td> <td>19.5W</td> <td>2xDVI-I SL/2xDP</td> </tr> <tr> <td>NVS 510</td> <td>192</td> <td>2GB</td> <td>33.4W</td> <td>4xmini DP</td> </tr> <tr> <td>Quadro K420</td> <td>192</td> <td>2GB</td> <td>41W</td> <td>1xDVI-I DL+1xDP</td> </tr> <tr> <td>Quadro K620</td> <td>384</td> <td>2GB</td> <td>45W</td> <td>1xDVI-I DL+1xDP</td> </tr> <tr> <td>Quadro K1200</td> <td>512</td> <td>4GB</td> <td>45W</td> <td>4xminiDP</td> </tr> <tr> <td>Quadro K2200</td> <td>640</td> <td>4GB</td> <td>68W</td> <td>1xDVI-I DL+2xDP</td> </tr> <tr> <td>Quadro M2000</td> <td>768</td> <td>4GB</td> <td>75W</td> <td>4xDP</td> </tr> <tr> <td>Quadro M4000</td> <td>1664</td> <td>8GB</td> <td>120W</td> <td>4xDP</td> </tr> </tbody> </table>	Adapter	Cores	Memory	Power	Connector	NVS 310	48	1GB	19.5W	2xDP	NVS 315	48	1GB	19.5W	2xDVI-I SL/2xDP	NVS 510	192	2GB	33.4W	4xmini DP	Quadro K420	192	2GB	41W	1xDVI-I DL+1xDP	Quadro K620	384	2GB	45W	1xDVI-I DL+1xDP	Quadro K1200	512	4GB	45W	4xminiDP	Quadro K2200	640	4GB	68W	1xDVI-I DL+2xDP	Quadro M2000	768	4GB	75W	4xDP	Quadro M4000	1664	8GB	120W	4xDP
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Quadro M2000	768	4GB	75W	4xDP																																															
Quadro M4000	1664	8GB	120W	4xDP																																															
Onboard drive controller	Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5, 10 support																																																		
Drive Bays	Two external 5.25" bays, two internal 3.5" bays (see right). Up to one 9.5mm optical plus 4 x 3.5" disk drive bays plus one M.2 NVMe SSD																																																		
Supporting disk drives	3.5" SATA HDD (7.2K 6Gbs)	500GB/1TB/2TB/3TB/4TB/6TB/1TB hybrid/2TB hybrid																																																	
	2.5" SATA SSD (6Gbs)	128GB/180GB*/240GB*/256GB*/480GB*/512GB*/1TB*																																																	
	M.2 NVMe SSD	256GB*/512GB*/1TB*, via PCIe 3.0 x4 adapter																																																	
	** Includes OPAL options																																																		
Max internal storage	16TB (4 x 4TB 3.5" HDDs) plus 512GB M.2 NVMe SSD																																																		
Media reader	9-in-1 card reader. Optional 29-in-1 card reader on selected models																																																		
Power supply	Supports one of the following: <ul style="list-style-type: none"> <li>250 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified</li> <li>400 watts with variable speed fan, autosensing, 92% PSU, Climate Savers Computing Platinum, 80 PLUS Platinum qualified</li> </ul>																																																		
Onboard Ethernet	One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN																																																		
HD Audio	Realtek ALC662 codec																																																		
TPM	Standard, TCG 1.2-compliant																																																		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)																																																		
Rear ports	1 VGA and 2 DisplayPort (for Intel HD Graphics models only), two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)																																																		

Components	Specification
Additional ports	Supports the following optional ports: <ul style="list-style-type: none"> <li>Two IEEE 1394 (one on rear and one on front flex module) via PCIe adapter, up to one adapter per system.</li> </ul> Supports one of the following per system: <ul style="list-style-type: none"> <li>Two rear USB 3.0 per PCIe adapter.</li> <li>One rear Thunderbolt via PCIe adapter.</li> <li>One front eSATA (on flex module), or one rear eSATA via cable and PCIe slot bracket, up to one eSATA port per system.</li> <li>One additional serial port via cable.</li> <li>One parallel port via cable</li> </ul>
	Mechanical
Environmental certifications	GREENGUARD certified/RoHS-compliant/EPEAT Gold rating/ENERGY STAR 6.1 qualified
Limited warranty	3-year limited onsite service with 9x5/NBD. Some parts are Customer Replaceable Units.



### Drive Bays and PCIe Slots

Bay 1 and Bay 2	5.25", support one of the following: HH optical/flex module**/9.5mm optical+3.5" HDD bay/3.5" HDD bay/Front Access Storage Enclosure ** Flex module supports one or more of the following: 9.5mm optical/29-in-1 reader/front IEEE 1394/front eSATA Up to one flex module is supported per system.
Bay 3	Optional 9-in-1 single slot reader
Bay 4	Standard 3.5" HDD bay
Bay 5	Standard 3.5" HDD bay
6 -Slots	Four PCIe slots (top-down): Slot 1: Half length, full height, PCIe 3.0 x16 (near CPU) Slot 2: Half length, full height, PCIe 3.0 x1 Slot 3: Half length, full height, PCIe 3.0 x16 (x4 elec) Slot 4: Half length, full height, PCIe 3.0 x1

For the list of ISV certifications, please visit [www.thinkworkstations.com/isv-certifications/](http://www.thinkworkstations.com/isv-certifications/)  
For a list of all supported options, please visit [https://download.lenovo.com/pccbbs/options\\_iso/ocm\\_july\\_2016.xlsx](https://download.lenovo.com/pccbbs/options_iso/ocm_july_2016.xlsx) sheet