# ThinkStation P320 Tower Platform Specifications

| Components | Specification |
|---|---|
| Chipset | Intel C236 Chipset |
| Intel AMT | Intel Active Management Technology 11 on Xeon models, Intel Standard Manageability on other models |
| Processor | One Intel "Kaby Lake" or "Skylake" processor as listed: |

**"Kaby Lake"**

| | |
|---|---|
| Xeon E3-1280 v6 | 4C/3.9GHz/8MB/72W/DDR4-2400 |
| Xeon E3-1275 v6 | 4C/3.8GHz/8MB/73W/DDR4-2400 |
| Xeon E3-1270 v6 | 4C/3.8GHz/8MB/72W/DDR4-2400 |
| Xeon E3-1245 v6 | 4C/3.7GHz/8MB/73W/DDR4-2400 |
| Xeon E3-1240 v6 | 4C/3.7GHz/8MB/72W/DDR4-2400 |
| Xeon E3-1230 v6 | 4C/3.5GHz/8MB/72W/DDR4-2400 |
| Xeon E3-1225 v6 | 4C/3.3GHz/8MB/73W/DDR4-2400 |
| Xeon E3-1220 v6 | 4C/3GHz/8MB/72W/DDR4-2400 |
| Core i7-7700K | 4C/4.2GHz/8MB/91W/DDR4-2400 |
| Core i7-7700 | 4C/3.6GHz/8MB/65W/DDR4-2400 |
| Core i5-7600 | 4C/3.5GHz/6MB/65W/DDR4-2400 |
| Core i5-7500 | 4C/3.4GHz/6MB/65W/DDR4-2400 |
| Core i5-7400 | 4C/3GHz/6MB/65W/DDR4-2400 |
| Core i3-7300 | 2C/4GHz/4MB/51W/DDR4-2400 |
| Core i3-7100 | 2C/3.9GHz/3MB/51W/DDR4-2400 |

**"Skylake"**

| | |
|---|---|
| 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 i5-6500 | 4C/3.2GHz/6MB/65W/DDR4-2133 |
| Core i5-6400 | 4C/2.7GHz/6MB/65W/DDR4-2133 |
| Core i3-6100 | 2C/3.7GHz/3MB/51W/DDR4-2133 |

| Components | Specification |
|---|---|
| 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), DDR4-2400. UDIMM. "Skylake" processor supports up to DDR4-2133. Core i7 and i5 processors cannot support ECC. |
| Intel HD Graphics in processor | Integrated Intel HD P530 in Xeon E3-12x5 v5 processors, or Intel HD P630 in Xeon E3-12x5 v6 processors, or Intel HD 530 in Core i7, i5, or i3 6000 processors. or Intel HD 630 in Core i7, i5, or i3 7000 processors. Works along with discrete graphics to support multi-display, enables three display connectors (2 DP, 1 VGA) on rear. |
| Discrete graphics | Two PCI Express 3.0 x16 slots for graphics adapters. Up to two Quadro P1000 on 250 watts models. Or up to two Quadro P2000, or up to one Quadro P4000 on 400 watts models. Supports the following NVIDIA graphics adapters: |

| 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 |
| NVS 810 | 1024 | 4GB | 68W | 8xmini DP |
| Quadro P400 | 256 | 2GB | 30W | 3xminiDP |
| Quadro P600 | 384 | 2GB | 40W | 4xminiDP |
| Quadro P1000 | 640 | 4GB | 47W | 4xminiDP |
| Quadro P2000 | 1024 | 5GB | 75W | 4xDP |
| Quadro P4000 | 1792 | 8GB | 105W | 4xDP |

| Components | Specification |
|---|---|
| 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 9mm optical plus 4 x 3.5" disk drive bays plus two M.2 NVMe SSD |

| Supporting disk drives | | |
|---|---|---|
| 3.5" SATA HDD (7.2K 6Gbs) | 1TB/2TB/4TB/1TB hybrid/2TB hybrid |
| 2.5" SATA SSD (6Gbs) | 256GB Opal/512GB/512GB Opal/1TB Opal/2TB opal |
| M.2 NVMe SSD, via PCIe adapter | 256GB Opal/512GB Opal/1TB Opal, PCIe 3.0 x4, up to 2; or 16GB Intel Optane Memory, PCIe 3.0 x2 |

| Components | Specification |
|---|---|
| Max internal storage | 16TB (4 x 4TB 3.5" HDDs) plus 2TB (2 x 1TB) M.2 NVMe SSD |
| Media reader | 9-in-1 card reader. Optional 29-in-1 card reader on selected models |

| Components | Specification |
|---|---|
| Power supply | One 250 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified. Or one 400 watts with variable speed fan, autosensing, Climate Savers Computing Platinum, 80 PLUS Platinum qualified. |
| Onboard Ethernet | One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN |
| HD Audio | Realtek ALC662 codec |
| TPM | Standard, TCG 2.0-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, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) |
| Mechanical | • Raven black color; metal case<br>• 6.89"W x 16.77"D x 14.8"H<br>• 175mm W x 426mm D x 376mm H<br>• 28.66 lb (13kg) max configuration<br>• 25-liter |
| Environmental certifications | GREENGUARD certified/RoHS-compliant/EPEAT Gold rating/ ENERGY STAR 6.1 qualified |
| Limited warranty | 1 or 3-year limited onsite service with 9x5/NBD. Some parts are Customer Replaceable Units. |
| ISV certifications | Please visit www.thinkworkstations.com/isv-certifications/ |
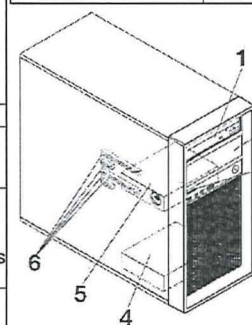
## Drive Bays and PCIe Slots



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|---|---|
| Bay 1 and Bay 2 | 5.25", support one of the following: HH optical/flex module/9mm optical+3.5" HDD bay/ 3.5" HDD bay/Front Access Storage Enclosure (FASE) Note: 1. Flex module supports one or more of the following: 9mm optical/ 29-in-1 reader/front IEEE 1394/front eSATA. 2. Up to one flex module/FASE 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 Note: 1. Both discrete graphics adapter and M.2 NVMe SSD should be installed on slot 1 or slot 3, the maximum quantity of discrete graphics adapter and M.2 NVMe SSD is 2. 2. When two discrete graphics adapters are used, no other PCIe card can be used. |