# ThinkStation P320 SFF 30BK0022**

**Region**
EMEA

**Machine Type**
30BK

**TopSeller**
TopSeller

**Processor**
Core i5-6500 4C/3.2GHz/6MB/65W/DDR4-2133

**Graphics**
Intel HD 530

**Memory**
1x8GB UDIMM DDR4-2400 Non-ECC

**Disks**
1x256GB SSD 2.5" SATA6Gbps Opal

**M.2 Drives**
None

**Optical**
HH DVD±RW

**Media Reader**
9-in-1

**Power Supply**
210W Bronze Fixed

**Optional Ports**
Serial

**Keyboard / Mouse**
USB / USB Opt

**Operating System**
Windows 10 DG Windows 7 Pro 64

**Warranty**
3-year, Onsite

**Global**
No

**End of Support**
Sep 26, 2022

**Ann Date (mm/yy)**
09/17

Note:
Country Code "US" is for United States, "++" is for EMEA countries (e.g. AD - Saudi, Arabia, AT - Austria, BM - Bulgaria, etc.), "xx" is for EAST countries (e.g. BM - Bulgaria, CX - Hungary, CY - Cyprus, etc.), and "**" is for MEA countries (e.g. AD - Saudi, Arabia, ED - Egypt, EQ - Sweden, etc.). Please be aware that the EMEA/ EAST/MEA models listed above might not be available in all countries

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**PSREF**

**http://psref.lenovo.com**
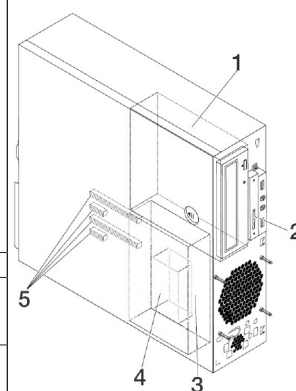Visit psref website for the latest version of Product Specifcations Reference.

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# ThinkStation P320 SFF Platform Specifications

*Product Specifications Reference (PSREF)*

| 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 "Kabylake" or "Skylake" processor as listed:<br>"Kaby Lake"<br><br>Xeon E3-1280 v6   4C/3.9GHz/8MB/72W/DDR4-2400<br>Xeon E3-1275 v6   4C/3.8GHz/8MB/73W/DDR4-2400<br>Xeon E3-1270 v6   4C/3.8GHz/8MB/72W/DDR4-2400<br>Xeon E3-1245 v6   4C/3.7GHz/8MB/73W/DDR4-2400<br>Xeon E3-1240 v6   4C/3.7GHz/8MB/72W/DDR4-2400<br>Xeon E3-1230 v6   4C/3.5GHz/8MB/72W/DDR4-2400<br>Xeon E3-1225 v6   4C/3.3GHz/8MB/73W/DDR4-2400<br>Xeon E3-1220 v6   4C/3GHz/8MB/72W/DDR4-2400<br>Core i7-7700   4C/3.6GHz/8MB/65W/DDR4-2400<br>Core i5-7600   4C/3.5GHz/6MB/65W/DDR4-2400<br>Core i5-7500   4C/3.4GHz/6MB/65W/DDR4-2400<br>Core i5-7400   4C/3GHz/6MB/65W/DDR4-2400<br>Core i3-7300   2C/4GHz/4MB/51W/DDR4-2400<br>Core i3-7100   2C/3.9GHz/3MB/51W/DDR4-2400<br><br>"Skylake"<br><br>Xeon E3-1245 v5   4C/3.5GHz/8MB/80W/DDR4-2133<br>Xeon E3-1240 v5   4C/3.5GHz/8MB/80W/DDR4-2133<br>Xeon E3-1230 v5   4C/3.4GHz/8MB/80W/DDR4-2133<br>Xeon E3-1225 v5   4C/3.3GHz/8MB/80W/DDR4-2133<br>Xeon E3-1220 v5   4C/3GHz/8MB/80W/DDR4-2133<br>Core i7-6700   4C/3.4GHz/8MB/65W/DDR4-2133<br>Core i5-6500   4C/3.2GHz/6MB/65W/DDR4-2133<br>Core i5-6400   4C/2.7GHz/6MB/65W/DDR4-2133<br>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), DDR4-2400. 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 NVIDIA Quadro P1000. Supports the following NVIDIA graphic adapters:<br><br>{{TABLE}} |
| 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* support<br>*RAID 5 needs three 2.5" SSD drives.* |
| Drive Bays | One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD |
| Supporting disk drives | 3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid<br>2.5" SATA SSD (6Gbs) 256GB Opal/512GB/512GB Opal/1TB Opal/2TB opal<br>M.2 NVMe SSD, via PCIe adapter 256GB Opal/512GB Opal/1TB Opal, via PCIe 3.0 x4 adapter, up to 2; or 16GB Intel Optane Memory, PCIe 3.0 x2 |
| Max internal storage | 10TB (2 x 4TB 3.5" HDDs + 1 x 2TB 2.5" SSD) plus two 1TB M.2 NVMe SSD |
| Media reader | 9-in-1 card reader. Optional 29-in-1 card reader on selected models |
| Power supply | 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified |
| Onboard Ethernet | One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN |
| HD Audio | Realtek ALC662 codec |
| TPM | Standard, TCG 2.0-compliant |

Discrete graphics adapter 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 P400 | 256 | 2GB | 30W | 3xminiDP |
| Quadro P600 | 384 | 2GB | 40W | 4xminiDP |
| Quadro P1000 | 640 | 4GB | 47W | 4xminiDP |

| Components | Specification |
|---|---|
| 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>• 4.02"W x 15.53"D x 13.31"H<br>• 102mm W x 394.5mm D x 338mm H<br>• 17.2 lb (7.9kg) max configuration<br>• 12.9-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**

| Bay 1 | 5.25", supports one of the following: HH optical/flex module***/9mm optical+3.5" HDD bay/ 3.5" HDD bay/Front Access Storage Enclosure<br>*** Flex module supports one or more of the following: 9mm optical/29-in-1 reader/front IEEE 1394/front eSATA. Up to one flex module is supported per system. |
|---|---|
| Bay 2 | Optional 9-in-1 single slot reader |
| Bay 3 | Standard 3.5" HDD bay |
| Bay 4 | Optional 2.5" HDD bay (under Bay 3) |
| 5 -Slots | Four PCIe slots (top-down):<br>Slot 1: Low Profile, PCIe 3.0 x16 (near CPU)<br>Slot 2: Low Profile, PCIe 3.0 x1<br>Slot 3: Low Profile, PCIe 3.0 x16 (x4 elec)<br>Slot 4: Low Profile, PCIe 3.0 x1 |

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