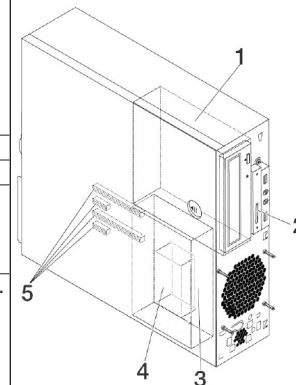


# ThinkStation P310 SFF Platform Specifications

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. 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       |
|                                | Quadro K420                                                                                                                                                                                                                                                                                                                                                                                                                                      | 192                                             | 2GB    | 41W      | 1xDVI-I DL+1xDP |
|                                | Quadro K620                                                                                                                                                                                                                                                                                                                                                                                                                                      | 384                                             | 2GB    | 45W      | 1xDVI-I DL+1xDP |
| Quadro K1200                   | 512                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4GB                                             | 45W    | 4xminiDP |                 |
| 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><i>* RAID 5 supports three 2.5" SSD drives only.</i>                                                                                                                                                                                                                                                       |                                                 |        |          |                 |
| Drive Bays                     | One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9.5mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + 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     |        |          |                 |
|                                | <i>** Includes OPAL options</i>                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                 |        |          |                 |
| Max internal storage           | 9TB (2 x 4TB 3.5" HDDs + 1 x 1TB 2.5" SSD) plus one 512GB 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, 85% PSU, 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 1.2-compliant                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                 |        |          |                 |
| Front ports                    | Two USB 3.0, microphone (3.5mm), headphone (3.5mm)                                                                                                                                                                                                                                                                                                                                                                                               |                                                 |        |          |                 |
| Rear ports                     | 1 VGA and 2 DisplayPort (functional only on Intel HD Graphics models), 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)                                                                                                                                                                                                                                          |                                                 |        |          |                 |
| Additional ports               | Supports the following optional ports:<br>• Two IEEE 1394 (one on rear and one on front flex module) via PCIe adapter, up to one adapter per system.<br>Supports one of the following per system:<br>• Two rear USB 3.0 per PCIe adapter.<br>• One front eSATA (on flex module), or one rear eSATA via cable and PCIe slot bracket, up to one eSATA port per system.<br>• One additional serial port via cable.<br>• One parallel port via cable |                                                 |        |          |                 |

| Components                   | Specification                                                                                                                                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mechanical                   | <ul style="list-style-type: none"> <li>Raven black color; metal case</li> <li>4.02"W x 15.53"D x 13.31"H</li> <li>102mm W x 394.5mm D x 338mm H</li> <li>17.2 lb (7.9kg) max configuration</li> <li>12.9-liter</li> </ul> |
| 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.                                                                                                                               |



## Drive Bays and PCIe Slots

|          |                                                                                                                                                                                                                                                                                                                         |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bay 1    | 5.25", supports one of the following:<br>HH optical/flex module***/9.5mm optical+3.5" HDD bay/<br>3.5" HDD bay/Front Access Storage Enclosure<br>*** Flex module supports one or more of the following: 9.5mm optical/<br>29-in-1 reader/front IEEE 1394/front eSATA.<br>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                                                                                                                      |



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\\_december\\_2016.xlsx](https://download.lenovo.com/pccbbs/options_iso/ocm_december_2016.xlsx) sheet