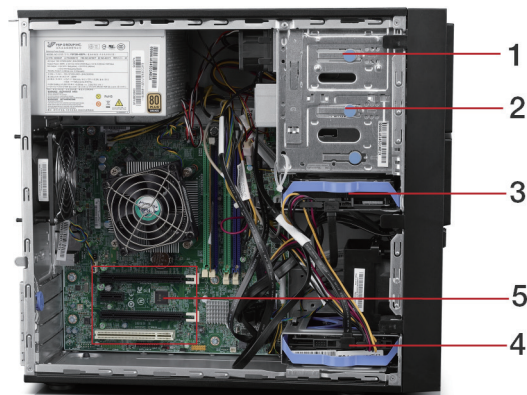


# ThinkServer TS140 TopSeller Models

Product Specifications Reference (PSREF)

| Components                  | Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                  | Tower or 4U rack.<br>Height: 375 mm (14.76 in), width: 175 mm (6.89 in), depth: 431 mm (16.97 in)                                                                                                                                                                                                                                                                                                                                                                        |
| Weight                      | Maximum configuration: 28.66 lb (13kg)                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Processor                   | Supports one of the following Intel processors (code name: Haswell): <ul style="list-style-type: none"> <li>Xeon E3-1200 v3: up to 4C/3.7GHz/8MB/84W/1600MHz</li> <li>Core i3: up to 2C/3.7GHz/4MB/54W/1600MHz</li> <li>Pentium: up to 2C/3.4GHz/3MB/53W/1600MHz</li> <li>Celeron: up to 2C/2.9GHz/2MB/53W/1333MHz</li> </ul>                                                                                                                                            |
| Chipset                     | Intel C226 Platform Controller Hub (PCH)                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Memory DIMMs                | 4 DIMM sockets, 2-channel capable. UDIMM, DDR3, up to 1600MHz                                                                                                                                                                                                                                                                                                                                                                                                            |
| Memory capacity             | 32GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Memory protection           | ECC                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| RAID controller             | Supports one of the following onboard or PCIe RAID adapters <ul style="list-style-type: none"> <li>RAID 0, 1, 5, 10 with onboard RAID 110, 6Gb/s SATA.</li> <li>RAID 0, 1, 10 with RAID 500, PCIe adapter, 6Gb/s SAS/SATA, optional key for RAID5.</li> <li>RAID 0, 1, 5, 10 with RAID 700, PCIe adapter, 6Gb/s SAS/SATA</li> </ul>                                                                                                                                      |
| Disk drive bays             | Two external 5.25" bays, two internal 3.5" bays (see right).<br>Up to one 9.5mm optical plus 4 3.5" or 2.5" disk drives. Supports internal RDX tape drive, consumes 5.25" bay, also support optional external USB RDX tape drive.<br>All disk drive bays are direct cabled, non-hot swap                                                                                                                                                                                 |
| Maximum internal storage    | Up to 24TB with 7.2K SATA HDD, up to 16TB with 7.2K SAS HDD, up to 1.92TB with SATA SSD                                                                                                                                                                                                                                                                                                                                                                                  |
| Optical drive               | Two 5.25" bays for optical. DVD-ROM or DVD±RW. Half-height or 9.5mm                                                                                                                                                                                                                                                                                                                                                                                                      |
| Network interfaces          | One onboard gigabit ethernet, Intel I217, shared with AMT. Supports optional discrete network adapters via PCIe slots                                                                                                                                                                                                                                                                                                                                                    |
| Security features           | Power-on and administrator password. TPM (TCG 1.2-compliant).<br>Optional padlock loop, Kensington cable lock                                                                                                                                                                                                                                                                                                                                                            |
| Systems management          | Intel Active Management Technology 9 on models with Xeon processor. Remote presence is supported on models with Xeon E3-12x5 v3 or E3-12x6 v3 processor                                                                                                                                                                                                                                                                                                                  |
| Operating systems supported | Microsoft Windows Server 2012 R2/2012/2008 R2. Windows Small Business Server 2011. Windows 8.1/8/7(except Home edition). Red Hat Enterprise Linux 6.5/6.7/7/7.1. SUSE Linux Enterprise Server 11 SP4. VMware vSphere (ESXi) 5.1 U2/5.5 U1/5.5 U2/5.5 U3<br><i>Note: VMware requires processors with Intel HD, add-on network adapters, and PCIe RAID adapters</i>                                                                                                        |
| Base warranty               | 1 or 3-year limited onsite service with 9x5/NBD.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Power supply                | Supports one of the following: <ul style="list-style-type: none"> <li>One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified</li> <li>One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified</li> </ul>                                                                                                                                                                                                                                              |
| Graphics                    | Integrated Intel HD Graphics on Xeon E3-12x6 v3, Xeon E3-12x5 v3, Core i3, Pentium, and Celeron processors. Uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DP, 1 VGA) on rear ports.<br>Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> <li>NVIDIA Quadro NVS 300, PCIe adapter, 512MB</li> <li>NVIDIA Quadro K600, PCIe adapter, 1GB</li> </ul> |

| Components                  | Specification                                                                                                                                                                                                                                             |                                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Front ports                 | Two USB 3.0 (blue)                                                                                                                                                                                                                                        |                                                         |
| 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). Optional parallel or serial ports via PCI or PCIe adapters |                                                         |
| Noise emissions             | Operating: < 35 dB(A). Idle: < 34 dB(A) (Maximum configuration)<br>GREENGUARD certified, Energy Star Server 1.1 qualified, RoHS-compliant                                                                                                                 |                                                         |
| Environmental specification | Temperature - operating                                                                                                                                                                                                                                   | 50 °F to 95 °F (10 °C to 35 °C)                         |
|                             | Temperature - storage (with package)                                                                                                                                                                                                                      | -40 °C to 70 °C                                         |
|                             | Altitude - operating                                                                                                                                                                                                                                      | Supported Altitude (unpressurized): 0-10000ft (0-3048m) |
|                             | Humidity - operating                                                                                                                                                                                                                                      | 10%~80%, non-condensing                                 |
|                             | Humidity - storage (with package)                                                                                                                                                                                                                         | 10%~90%, non-condensing                                 |



## Drive Bays and PCIe Slots

|          |                                                                                 |
|----------|---------------------------------------------------------------------------------|
| Bay 1    | 5.25", supports one of the following: HH optical, 9.5mm optical+3.5"/2.5" drive |
| Bay 2    | 5.25", supports one of the following: 3.5"/2.5" drive, tape drive               |
| Bay 3    | Standard 3.5"/2.5" disk drive bay                                               |
| Bay 4    | Standard 3.5"/2.5" disk drive bay                                               |
| 5 -Slots | Four PCIe slots (top-down):                                                     |
|          | Slot 1: PCIe 3.0 x16, full height, half length (near CPU)                       |
|          | Slot 2: PCIe 2.0 x1, full height, half length                                   |
|          | Slot 3: PCIe 2.0 x16 (x4 elec), full height, half length                        |
|          | Slot 4: PCI 2.3, full height, half length                                       |

| Model               | 70A4007X++                                |
|---------------------|-------------------------------------------|
| Product             | TS140                                     |
| Region              | EMEA                                      |
| Machine Type        | 70A4                                      |
| TopSeller           | Yes                                       |
| Processor           | Xeon E3-1246 v3 4C/3.5GHz/8MB/84W/1600MHz |
| Memory              | 2x8GB 1600MHz UDIMM                       |
| RAID controller     | RAID100                                   |
| Disk bays           | 4x3.5" DC                                 |
| Internal disk drive | Open                                      |
| Optical             | No                                        |
| System mgmt         | AMT9.0                                    |
| Preloaded OS        | No                                        |
| Base warranty       | 1-year                                    |
| Power supply        | 280W 85% Fixed                            |
| Ann date (mm/yy)    | 03/16                                     |

