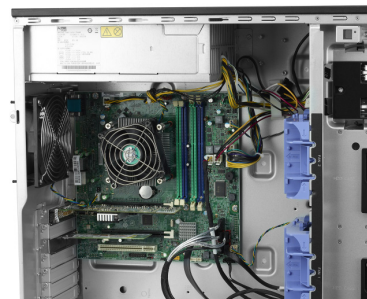


ThinkServer TS440 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification																								
Dimensions	Tower or 5U rack. Height: 430 mm (16.9 in), width: 195 mm (7.68 in), depth: 595 mm (23.4 in)																								
Weight	Maximum configuration: 61.7 lb (28kg)																								
Processor	Supports one of the following Intel processors (code name: Haswell): <ul style="list-style-type: none">• Xeon E3-1200 v3: up to 4C/3.7GHz/8MB/84W/1600MHz																								
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">• RAID 0, 1, 5, 10 with onboard RAID 100, 6Gb/s SATA.• RAID 0, 1, 10 with RAID 500, PCIe adapter, 6Gb/s SAS/SATA, optional key for RAID5/50.• RAID 0, 1, 5, 6, 10, 50, 60 with RAID 700, PCIe adapter, 6Gb/s SAS/SATA, optional Intelligent Battery Backup Unit (iBBU08). <i>Note: RAID 50 and 60 are supported on 8 hard drive bays models only.</i>																								
Disk drive bays	Up to 4 3.5" disk bays, non-hot swap, direct cable. Or up to 8 3.5" disk bays, hot-swap. Or up to 8 2.5" disk bays, hot-swap. On front. Supports internal RDX tape drive, cosumes 5.25" bay, also supports optional external USB RDX tape drive. <table><tr><th>Disk bay configuration</th><th colspan="3">RAID controller requirements and optional drives supported</th></tr><tr><th></th><th>RAID100</th><th>RAID500</th><th>RAID700</th></tr><tr><td>4x3.5" non-hot swap</td><td>•</td><td></td><td></td></tr><tr><td>4x3.5" HS</td><td>•</td><td>•</td><td>•</td></tr><tr><td>8x3.5" HS</td><td></td><td>•</td><td>•</td></tr><tr><td>8x2.5" HS</td><td></td><td>•</td><td>•</td></tr></table>	Disk bay configuration	RAID controller requirements and optional drives supported				RAID100	RAID500	RAID700	4x3.5" non-hot swap	•			4x3.5" HS	•	•	•	8x3.5" HS		•	•	8x2.5" HS		•	•
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	RAID100	RAID500	RAID700																						
4x3.5" non-hot swap	•																								
4x3.5" HS	•	•	•																						
8x3.5" HS		•	•																						
8x2.5" HS		•	•																						
Maximum internal storage	3.5" non-hot swap model: up to 24TB with 7.2K SATA HDD. 3.5" hot swap model: up to 48TB with 7.2K SATA HDD, up to 32TB with 7.2K SAS HDD, up to 4.8TB with 15K SAS HDD, up to 2.4TB with SATA SSD 2.5" hot swap model: up to 8TB with 7.2K SATA HDD, up to 7.2TB with 10K SAS HDD, up to 4.8TB with 15K SAS HDD, up to 2.4TB with SATA SSD <i>Note: Supports up to 4 SSD drives.</i>																								
Optical drive	Two 5.25" bays for optical. DVD-ROM or DVD±RW. Half-height																								
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). 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 2016/2012 R2/2012/2008 R2. Windows Small Business Server 2011. Windows 8.1/8/7(except Home edition). Red Hat Enterprise Linux 6.4/6.5/6.7/7/7.1. SUSE Linux Enterprise Server 11/12. VMware vSphere (ESXi) 5.1 U1/5.1 U2/5.5/5.5 U1/5.5 U2/5.5 U3, Citrix Xen server 6.2 <i>Note: VMware requires processors with Intel HD, add-on network adapters, and PCIe RAID adapters.</i>																								

Components	Specification
Base warranty	1 or 3-year limited onsite service with 9x5/NBD.
Power supply	Supports one of the following, depending on models: • One fixed 450 watts, universal, 80 PLUS Platinum qualified. • Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies
Graphics	Integrated Intel HD Graphics on Xeon E3-12x6 v3, Xeon E3-12x5 v3 processors. Uses main memory, works along with discrete graphics to support multi-display, enables one VGA connector on rear. Also supports the following optional discrete graphics adapters: • NVIDIA Quadro NVS 300, PCIe adapter, 512MB • NVIDIA Quadro NVS 315, PCIe adapter, 1GB
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45). Optional parallel or serial ports via PCI or PCIe adapters
Noise emissions	Operating: < 42 dB(A). Idle: < 38 dB(A) (Maximum configuration)
Environmental specification	GREENGUARD certified, Energy Star Server 1.1 qualified, RoHS-compliant
	Temperature - operating
	Temperature - storage (with package)
	Altitude - operating
	Humidity - operating
	Humidity - storage (with package)



Expansion 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

Note: All PCI/PCIe adapters are optional.