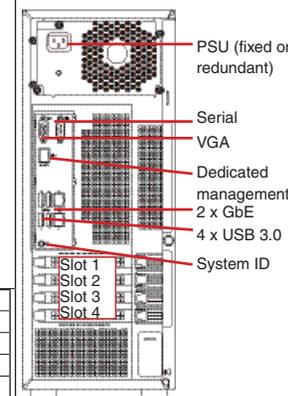


# ThinkServer TS460 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification				
Dimensions	42L tower or 4U rack. Height: 443.5 mm (17.46 in) with foot stands. Width: 173 mm (6.81 in). Depth: 593 mm (23.35 in) including front door and handle of hot-swap power supply				
Weight	Maximum configuration: 57.32 lb (26.5 kg)				
Processor	Supports one of the following Intel "Kaby Lake" processors:				
	Xeon E3-1280 v6 4C/3.9GHz/8MB/72W/DDR4-2400				
	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/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 E3-1220 v6 4C/3GHz/8MB/72W/DDR4-2400				
	Core i3-7320 2C/4.1GHz/4MB/51W/DDR4-2400				
	Core i3-7300 2C/4GHz/4MB/51W/DDR4-2400				
	Core i3-7300T 2C/3.5GHz/4MB/35W/DDR4-2400				
	Core i3-7100 2C/3.9GHz/3MB/51W/DDR4-2400				
Core i3-7100T 2C/3.4GHz/3MB/35W/DDR4-2400					
Pentium G4620 2C/3.7GHz/3MB/51W/DDR4-2400					
Pentium G4600 2C/3.6GHz/3MB/51W/DDR4-2400					
Pentium G4600T 2C/3GHz/3MB/35W/DDR4-2400					
Pentium G4560 2C/3.5GHz/3MB/54W/DDR4-2400					
Pentium G4560T 2C/2.9GHz/3MB/35W/DDR4-2400					
Processor	Supports one of the following Intel "Skylake" processors:				
	Xeon E3-1280 v5 4C/3.7GHz/8MB/80W/DDR4-2133				
	Xeon E3-1270 v5 4C/3.6GHz/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 E3-1220 v5 4C/3GHz/8MB/80W/DDR4-2133				
	Core i3-6320 2C/3.9GHz/4MB/51W/DDR4-2133				
	Core i3-6300T 2C/3.3GHz/4MB/35W/DDR4-2133				
	Core i3-6300 2C/3.8GHz/4MB/51W/DDR4-2133				
	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133				
Core i3-6100 2C/3.7GHz/3MB/51W/DDR4-2133					
Pentium G4520 2C/3.6GHz/3MB/51W/DDR4-2133					
Pentium G4500T 2C/3GHz/3MB/35W/DDR4-2133					
Pentium G4500 2C/3.5GHz/3MB/51W/DDR4-2133					
Pentium G4400T 2C/2.9GHz/3MB/35W/DDR4-2133					
Pentium G4400 2C/3.3GHz/3MB/54W/DDR4-2133					
Chipset	Intel C232 Platform Controller Hub (PCH)				
Memory DIMMs	4 DIMM sockets with 2-channels. UDIMM. DDR4-2133 or DDR4-2400				
Memory capacity	Up to 64GB (16GB x 4)				
Memory protection	ECC				
RAID controller	RAID controller				
	Drive type				
	RAID support				
RAID controller	Onboard RAID121i 6Gbs SATA 0/1/5/10				
RAID520i PCIe 12Gbs SAS/SATA 0/1/10, 5 with optional key					
RAID720i PCIe 12Gbs SAS/SATA 0/1/10/5/50, 6/60 with optional cache					
	Optional cache for RAID720i: 1GB memory, or 1GB, 2GB, 4GB flash with super capacitor.				
Disk drive bays	Supports one of the following configurations:				
	Disk bays configuration	RAID controller	Optical	Tape drive	
	4x3.5" SATA non-hot swap	121i	up to 2	RDX up to 1	LTO -
	4x3.5" SATA hot-swap	121i	up to 2	up to 1	-
	4x3.5" SATA/SAS hot-swap	520i or 720i	up to 2	up to 1	up to 1, 520i only
	8x3.5" SATA/SAS hot-swap	520i or 720i	up to 2	up to 1	-
	8x2.5" SATA/SAS hot-swap	520i or 720i	up to 2	up to 1	-
	16x2.5" SATA/SAS hot-swap	520i or 720i	up to 2	up to 1	-
	4x3.5" + 8x2.5" SATA/SAS hot-swap	520i or 720i	up to 2	up to 1	-
	4 x 3.5" HS can be upgraded to 8 x 3.5" HS or 4 x 3.5" + 8 x 2.5" HS, 8 x 2.5" HS can be upgraded to 16 x 2.5" HS or 4 x 3.5" + 8 x 2.5" HS, redundant PSU models only, RAID520i/RAID720i and expansion kit is needed, more that 8 disk bays needs expander card. Also supports one M.2 SATA SSD, 32GB or 128GB.				
Supporting disk drives	3.5" SATA HDD, 7.2K 6Gbs, HS or NHS	1TB/2TB/3TB/4TB/6TB/8TB/10TB/12TB			
	3.5" SAS HDD, 7.2K 12Gbs, HS	1TB/2TB/3TB/4TB/6TB/8TB/10TB			
	2.5" SAS HDD, 10K 12Gbs, HS, 2.5" or 3.5" bay	300GB/600GB/900GB/1.2TB/1.8TB/2.4TB			
	2.5" SAS HDD, 15K 12Gbs, HS, 2.5" or 3.5" bay	300GB/600GB			
	2.5" SATA SSD, 6Gbs, HS, 2.5" or 3.5" bay	120GB/240GB/480GB/800GB/960GB			
	2.5" SATA HDD, 7.2K 6Gbs, HS	1TB/2TB			
M.2 SATA SSD	32GB/128GB				

Components	Specification			
Maximum internal storage	Up to 64TB with 8TB 3.5" SAS or SATA HDDs, 8 x 3.5" HS bay			
Optical drive	Two 5.25" bays. Up to 2 optical drives. DVD-ROM or DVD±RW. Half-height. 2nd optical drive will be disable if M.2 SATA SSD is used			
Tape drive	Supports one tape drive in 5.25" bay. RDX or LTO. LTO Tape drive needs RAID520i			
Network interfaces	Two integrated Gigabit Ethernet 1000BASE-T ports (RJ-45) with Intel i210. One dedicate management port with Realtek RTL8211E			
Systems management	UEFI. Onboard Aspeed AST2400 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC). Control Panel LEDs shows the status of power, disk drives, network, system. On rear system ID. Supports EasyStartup, Power Planner, Lenovo ThinkServer Diagnostics Standalone, ToolsCenter Suite CLI inventory module on ThinkServ-er, Lenovo xClarity Administrator			
Security features	Power-on and administrator password. Optional TPM, TCG 1.2 or 2.0 compliant.			
Operating systems	Microsoft Windows Server 2016/2012 R2. Red Hat Enterprise Linux 6.8/7.3(6.8 cannot support Kaby Lake processors). SUSE Linux Enterprise Server 12 SP2/11 SP4. VMware vSphere (ESXi) 6.0U2/6.5			
Base warranty	1 or 3-year limited onsite service with 9x5/NBD.			
Power supply	Supports one of the following, depending on models: • One fixed 300 watts, universal, 80 PLUS Bronze qualified. • Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, universal, redundant with two power supplies			
Graphics	Integrated in onboard Aspeed AST2400 graphics/management processor. Optional NVIDIA Quadro K420			
Front ports	Two USB 3.0 (blue)			
Rear ports	One VGA, four USB 3.0, one RJ-45 (dedicated mgmt), two ethernet, one serial (9-pin). Add-on parallel or serial ports via optional PCIe adapters			
Noise emissions	Operating: < 43.6 dB(A). Idle: < 33 dB(A) (Maximum configuration)			
Environmental specification	All models supports ASHARE B. Models with the following configuration supports ASHARE A3: Xeon E3-1230 v5/8GBx2/DVD±RW/1TB SATAx4/RAID520i/450Wx2/TPM			
	ASHRAE A2	ASHRAE A3	ASHRAE B	
	Temperature - operating	10°C to 35°C (50°F to 95°F)	5°C to 40°C (41°F to 104°F)	5°C to 35°C (41°F to 95°F)
	Temperature - storage (with package)	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)
	Altitude - operating	20% to 80% (non-condensing)	8% to 85% (non-condensing)	8% to 80% (non-condensing)
	Humidity - storage (with package)	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
	Altitude - operating	0 m to 3048 m (0 ft to 10 000 ft) in an unpressurized environment		
	GREENGUARD certified, RoHS-compliant, Energy Star Server 2.1 qualified on redundant PSU models			



**Expansion slots**  
4 PCIe 3.0 slots (top-down):  
Slot 1: PCIe 3.0 x4, full height, full length, open-end, from PCH  
Slot 2: PCIe 3.0 x16, full height, full length, from CPU  
Slot 3: PCIe 3.0 x1, full height, half length, from PCH  
Slot 4: PCIe 3.0 x8, full height, half length, open-end, from CPU  
Note:  
1. If a PCIe card is connected to slot 4, both slot 2 and slot 4 will work at PCIe x8.  
2. If a discrete graphics card is used, slot 2 will work at PCIe x16 and slot 4 will be disable.

<b>Model</b>	<b>70TT000AEA</b>
Product	ThinkServer TS460
Region	EMEA
Machine Type	70TT
TopSeller	TopSeller
Processor	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133
Memory	1x8GB UDIMM DDR4-2133 ECC
Storage Controller	RAID520i
Disk Bays	4x3.5" HS
Disks	Open
Optical	HH DVD±RW
Add-on NIC	None
Add-on Ports	None
System Management	TPM 2.0
Operating System	None
Warranty	3-year
Power Supply	1x450W Gold
Ann Date (mm/yy)	02/17

