

# ThinkServer TS460 70TR001BUX

Region  
US

Warranty  
1-year

Machine Type  
70TR

Power Supply  
Fixed 300W Bronze

TopSeller  
TopSeller

Ann Date (mm/yy)  
06/17

Processor  
Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400

Memory  
1x 8GB UDIMM DDR4-2400 ECC

Storage Controller  
RAID 520i

Disk Bays  
8x 2.5" HS

Disks  
Open

Optical  
Open

Additional Networking  
None

Optional Ports  
None

TPM  
TPM 2.0

Operating System  
None

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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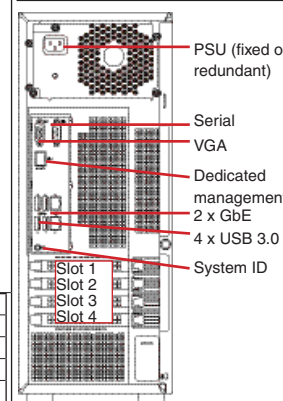
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# ThinkServer TS460 Platform Specifications

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
	Onboard RAID121i 6Gbs SATA 0/1/5/10
RAID controller	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
	RDX
	LTO
	4x3.5" SATA non-hot swap 121i up to 2 up to 1 -
	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
Disk drive bays	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.
	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
Supporting disk drives	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 follwing, 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)
Environmental specification	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.

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