

ThinkServer TD350 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification	Components	Specification																																								
Dimensions	Tower or 4U rack. Tower: Height: 459 mm (18.1 in), width: 251 mm (9.9 in), depth: 686 mm (27 in) Rack: height: 173 mm (6.8 in), width: 482 mm (19 in), depth: 686 mm (27 in)	Maximum internal storage	3.5" model: up to 120TB with 7.2K SATA or SAS HDD, up to 27TB with 10K SAS HDD, up to 9TB with 15K SAS HDD, or up to 24TB with SATA or SAS SSD. 2.5" model: up to 64TB with 7.2K SATA HDD, up to 57.6TB with 10K SAS HDD, up to 19.2TB with 15K SAS HDD, or up to 51.2TB with SATA or SAS SSD																																								
Weight	Minimum configuration: 22 kg (48.5 lb), maximum: 41.4 kg (91.27 lb)	SD module	Up to 2 SDHC flash cards via optional SD module, 8GB or 32GB each																																								
Processor	Up to two 135W Intel Xeon E5-2600 v4 or E5-2600 v3 family processors.	Optical drive	Two 5.25" bays for optical drive. DVD-ROM or DVD±RW. Half-height or 9.5mm																																								
	E5-2698 v4	20C/2.2GHz/50MB/135W/DDR4-2400	Network interfaces	One dedicate management port, two gigabit ethernet ports. Supports optional discrete network adapters via PCIe slots																																							
	E5-2695 v4	18C/2.1GHz/45MB/120W/DDR4-2400	Security features	Power-on and administrator password. Optional TPM (TCG 1.2 or 2.0-compliant)																																							
	E5-2690 v4	14C/2.6GHz/35MB/135W/DDR4-2400	Systems management	Supports ThinkServer System Manager (TSM), optional TSM Premium for remote presence. UEFI. Onboard Aspeed AST2400 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC). Control Panel LEDs shows the status of power, ID, network, system. Supports ThinkServer Diagnostics, ThinkServer Deployment Manager, ThinkServer Energy Manager, ThinkServer System Manager CLI, Lenovo Think-Server Partner Pack for VMware vCenter and Microsoft System Center Operations Manager, ThinkServer Power Planner.																																							
	E5-2683 v4	16C/2.1GHz/40MB/120W/DDR4-2400																																									
	E5-2680 v4	14C/2.4GHz/35MB/120W/DDR4-2400																																									
	E5-2667 v4	8C/3.2GHz/25MB/135W/DDR4-2400																																									
	E5-2660 v4	14C/2GHz/35MB/105W/DDR4-2400																																									
	E5-2650L v4	14C/1.7GHz/35MB/65W/DDR4-2400																																									
	E5-2650 v4	12C/2.2GHz/30MB/105W/DDR4-2400																																									
	E5-2643 v4	6C/3.4GHz/20MB/135W/DDR4-2400																																									
	E5-2640 v4	10C/2.4GHz/25MB/90W/DDR4-2133																																									
	E5-2637 v4	4C/3.5GHz/15MB/135W/DDR4-2400																																									
	E5-2630L v4	10C/1.8GHz/25MB/55W/DDR4-2133																																									
	E5-2630 v4	10C/2.2GHz/20MB/85W/DDR4-2133																																									
	E5-2623 v4	4C/2.6GHz/10MB/85W/DDR4-2133																																									
	E5-2620 v4	8C/2.1GHz/20MB/85W/DDR4-2133																																									
	E5-2609 v4	8C/1.7GHz/20MB/85W/DDR4-1866																																									
	E5-2603 v4	6C/1.7GHz/15MB/85W/DDR4-1866																																									
	E5-2698 v3	16C/2.3GHz/40MB/135W/DDR4-2133																																									
	E5-2695 v3	14C/2.3GHz/35MB/120W/DDR4-2133																																									
	E5-2690 v3	12C/2.6GHz/30MB/135W/DDR4-2133																																									
	E5-2685 v3	12C/2.6GHz/30MB/120W/DDR4-2133																																									
	E5-2683 v3	14C/2GHz/35MB/120W/DDR4-2133																																									
	E5-2680 v3	12C/2.5GHz/30MB/120W/DDR4-2133																																									
	E5-2670 v3	12C/2.3GHz/30MB/120W/DDR4-2133																																									
	E5-2667 v3	8C/3.2GHz/20MB/135W/DDR4-2133																																									
	E5-2660 v3	10C/2.6GHz/25MB/105W/DDR4-2133																																									
	E5-2650L v3	12C/1.8GHz/30MB/65W/DDR4-2133																																									
	E5-2650 v3	10C/2.3GHz/25MB/105W/DDR4-2133																																									
	E5-2643 v3	6C/3.4GHz/20MB/135W/DDR4-2133																																									
	E5-2640 v3	8C/2.6GHz/20MB/90W/DDR4-1866																																									
	E5-2637 v3	4C/3.5GHz/15MB/135W/DDR4-2133																																									
	E5-2630L v3	8C/1.8GHz/20MB/55W/DDR4-1866																																									
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	E5-2623 v3	4C/3GHz/10MB/105W/DDR4-1866																																									
E5-2620 v3	6C/2.4GHz/15MB/85W/DDR4-1866																																										
E5-2609 v3	6C/1.9GHz/15MB/85W/DDR4-1600																																										
E5-2603 v3	6C/1.6GHz/15MB/85W/DDR4-1600																																										
Chipset	Intel C612 Platform Controller Hub (PCH)	Power supply	Up to two redundant hot-swap 450W/550W/750W/1100W power supplies. 450 W is 80 PLUS Gold qualified. 550W and 1100W are 80 PLUS Platinum qualified. 750W is 80 PLUS Platinum or Titanium qualified. 750W Titanium is 200V - 240V, others are 110V - 240V.																																								
Memory DIMMs	16 DIMM sockets (8 DIMMs per processor), 8-channel capable (4-channel per processor). RDIMM and LRDIMM (cannot be intermixed), DDR4, up to 2133MHz		<table><tr><th>Disk bay configuration</th><th colspan="4">PSU requirements</th></tr><tr><td></td><th>450W</th><th>550W</th><th>750W</th><th>1100W</th></tr><tr><td>5x3.5" ES</td><td>• (up to 1 CPU)</td><td>•</td><td>•</td><td>•</td></tr><tr><td>5x3.5" HS</td><td>• (up to 1 CPU)</td><td>•</td><td>•</td><td>•</td></tr><tr><td>15x3.5" HS</td><td></td><td></td><td>•</td><td>•</td></tr><tr><td>8x2.5" HS</td><td>• (up to 1 CPU)</td><td>•</td><td>•</td><td>•</td></tr><tr><td>16x2.5" HS</td><td>• (up to 1 CPU)</td><td>•</td><td>•</td><td>•</td></tr><tr><td>32x2.5" HS</td><td></td><td></td><td>•</td><td>•</td></tr></table>	Disk bay configuration	PSU requirements					450W	550W	750W	1100W	5x3.5" ES	• (up to 1 CPU)	•	•	•	5x3.5" HS	• (up to 1 CPU)	•	•	•	15x3.5" HS			•	•	8x2.5" HS	• (up to 1 CPU)	•	•	•	16x2.5" HS	• (up to 1 CPU)	•	•	•	32x2.5" HS			•	•
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16x2.5" HS	• (up to 1 CPU)		•	•	•																																						
32x2.5" HS				•	•																																						
Memory capacity	512GB (RDIMM, 32GB x 16)/1024GB (LRDIMM, 64GB x 16), 2nd CPU is needed	Graphics	Onboard Aspeed AST2400 with 16MB memory, one VGA on rear																																								
Memory protection	ECC, memory mirroring, lockstep, and memory sparing	Front ports	Two USB 2.0																																								
RAID controller	<table><tr><th>RAID controller</th><th>Drive type</th><th>RAID support</th><th>Compatible models</th></tr><tr><td>Onboard RAID110i</td><td>6Gbs SATA</td><td>0/1/10,5 with optional key</td><td>5x3.5" HS/ES, 8x2.5" HS</td></tr><tr><td>RAID520i PCIe</td><td>12Gbs SAS/SATA</td><td>0/1/10,5/50 with optional key</td><td>5x3.5" HS, 8x2.5" HS</td></tr><tr><td>RAID720i PCIe</td><td>12Gbs SAS/SATA</td><td>0/1/10/5/50,6/60 with optional cache</td><td>5x3.5" HS, 8x2.5" HS</td></tr><tr><td>AnyRAID 510i</td><td>6Gbs SAS/SATA</td><td>0/1/10,5/50 with optional key</td><td>5x3.5" HS, 8x2.5" HS</td></tr><tr><td>AnyRAID 720i</td><td>12Gbs SAS/SATA</td><td>0/1/10/5/50, 6/60 with optional cache</td><td>5x3.5" HS, 8x2.5" HS</td></tr><tr><td>AnyRAID 720ix</td><td>12Gbs SAS/SATA</td><td>0/1/10/5/50/6/60</td><td>15x3.5" HS, 16/32x2.5" HS</td></tr></table>	RAID controller	Drive type	RAID support	Compatible models	Onboard RAID110i	6Gbs SATA	0/1/10,5 with optional key	5x3.5" HS/ES, 8x2.5" HS	RAID520i PCIe	12Gbs SAS/SATA	0/1/10,5/50 with optional key	5x3.5" HS, 8x2.5" HS	RAID720i PCIe	12Gbs SAS/SATA	0/1/10/5/50,6/60 with optional cache	5x3.5" HS, 8x2.5" HS	AnyRAID 510i	6Gbs SAS/SATA	0/1/10,5/50 with optional key	5x3.5" HS, 8x2.5" HS	AnyRAID 720i	12Gbs SAS/SATA	0/1/10/5/50, 6/60 with optional cache	5x3.5" HS, 8x2.5" HS	AnyRAID 720ix	12Gbs SAS/SATA	0/1/10/5/50/6/60	15x3.5" HS, 16/32x2.5" HS	Rear ports	One VGA, four USB 3.0, one RJ-45 (dedicate/share mgmt), two ethernet (RJ-45), one serial (9-pin)												
	RAID controller	Drive type	RAID support	Compatible models																																							
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Disk drive bays	Optional cache for RAID 720/AnyRAID 720i and 720ix: 1GB read-only memory or 1GB/2GB/4GB flash with super capacitor. Flash options include CacheVault, CacheCade Pro, and FastPath. 720ix must have cache.	Cooling	4 (3+1), hot-swap																																								
	Up to 15 3.5" or 32 2.5" hot-swap bays, or up to 5 3.5" easy-swap bays, on front. Up to 2 M.2 SSD drives via optional M.2 module. Up to one internal LTO-6 SAS tape drive on 720ix model, or external RDX tape drive via USB.	Noise emissions	Operating: < 6.5 Bels. Idle: < 6 Bels (Maximum configuration)																																								
		Environmental specification	<table><tr><th>ASHRAE Class</th><th>A4</th><th>A3</th><th>A2</th></tr><tr><td>Temperature - operating</td><td>41 °F to 113 °F (5 °C to 45 °C)</td><td>41 °F to 104 °F (5 °C to 40 °C)</td><td>50 °F to 95 °F (10 °C to 35 °C)</td></tr><tr><td>Temperature - storage (with package)</td><td colspan="3">-40 °C to 60 °C</td></tr><tr><td>Altitude - operating</td><td colspan="3">(Unpressurized): 0-10000ft (0-3048m)</td></tr><tr><td>Humidity - operating (non-condensing)</td><td>8%-90%</td><td>8%-85%</td><td>20%-80%</td></tr><tr><td>Humidity - storage (with package)</td><td colspan="3">8%-90%, non-condensing</td></tr></table>	ASHRAE Class	A4	A3	A2	Temperature - operating	41 °F to 113 °F (5 °C to 45 °C)	41 °F to 104 °F (5 °C to 40 °C)	50 °F to 95 °F (10 °C to 35 °C)	Temperature - storage (with package)	-40 °C to 60 °C			Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)			Humidity - operating (non-condensing)	8%-90%	8%-85%	20%-80%	Humidity - storage (with package)	8%-90%, non-condensing																		
ASHRAE Class	A4		A3	A2																																							
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			ASHRAE Class A4: ES or 8x2.5" HS bays/Lenovo-qualified CPU; maximum of 120W thermal design power; not low-power type (no L-suffix in the CPU name)/No internal tape/Two PSU installed for redundancy/ Lenovo-qualified PCIe card; power consumption of each PCIe card does not exceed 15W. 32 x 2.5" models support ASHRAE Class A2, the other models support ASHRAE Class A3.																																								
				Expansion slots																																							
				Slot 7 (CPU1)	PCIe 3.0 x16, full height, full length, double-wide																																						
		Slot 6 (CPU1)		PCIe 3.0 x16 (x8 elec), full height, full length																																							
		Slot 5 (CPU1)		PCIe 3.0 x16 (x8 elec), full height, full length																																							
		Slot 4 (CPU2)		PCIe 3.0 x16 (x8 elec), full height, full length																																							
		Slot 5 (CPU2)		PCIe 3.0 x16, full height, full length																																							
		Slot 6 (CPU2)		PCIe 3.0 x16 (x8 elec), full height, full length																																							
		Slot 7 (CPU2)	PCIe 3.0 x16 (x8 elec), full height, full length																																								

For a list of all supported options, please see https://download.lenovo.com/pccbbs/options_iso/ocm_feb_2016_thinkserver.xlsx sheet

Expansion slots

Slot 1 (CPU1)	PCIe 3.0 x16, full height, full length, double-wide
Slot 2 (CPU1)	PCIe 3.0 x16 (x8 elec), full height, full length
Slot 3 (CPU1)	PCIe 3.0 x16 (x8 elec), full height, full length
Slot 4 (CPU2)	PCIe 3.0 x16 (x8 elec), full height, full length
Slot 5 (CPU2)	PCIe 3.0 x16, full height, full length
Slot 6 (CPU2)	PCIe 3.0 x16 (x8 elec), full height, full length
Slot 7 (CPU2)	PCIe 3.0 x16 (x8 elec), full height, full length

Model	70DG000F++
Product	TD350
Region	EMEA
Machine type	70DG
TopSeller	Yes
Processor	1xE5-2609 v3 6C/1.9GHz/15MB/85W/1600MHz
2nd CPU	4XG0F28786
Memory	1x8GB 2133MHz RDIMM
AnyRAID	AnyRAID 110i+Key
Disk bays	5x3.5" HS
Internal disk drive	Open
Optical	HH DVD±RW
TPM	No
System mgmt	TSM
Preloaded OS	No
Base warranty	3-year
Power supply	750Wx1 Platinum
Ann date (mm/yy)	09/14
SD module	No
Tape drive	No
PCIe SSD adpr	No
Chassis intrusion switch	Switch
PCIe ethernet card	No
M.2 module	No
Cable mgmt	No
Graphics/GPU Computing/GRID	No



