

Lenovo ThinkServer

PSREF



Product Specifications Reference

Version 511, August 2017

U.S.

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Summary of Changes

This section describes the changes made in this version of ThinkServer PSREF and in previous version
This edition might also include minor corrections and editorial changes which are not identified

August 23, 2017 - Version 511

Additions in this update

- ▶ Update ThinkServer RD650/RD550/RD450/RD350/TD350/TS460/RS160 platform specifications, add 12TB 7.2K SATA6Gbs HDD support

June 21, 2017 - Version 508

Additions in this update

- ▶ Add ThinkServer TS460 models announced June 2017
- ▶ Add ThinkServer RS160 models announced June 2017
- ▶ Update ThinkServer TS460 platform specifications, add new SBB support: Kaby Lake Xeon, Core i3, and Pentium processors. DDR4-2400 memory. 10TB 7.2K SATA6Gbs HDD, 10TB 7.2K SAS12Gbs HDD, 300GB/600GB 15K 2.5" SAS. Red Hat Enterprise Linux 7.3. SUSE Linux Enterprise Server 12 SP2/11 SP4
- ▶ Update ThinkServer RS160 platform specifications, add new SBB support: Kaby Lake Xeon, Core i3, Pentium, and Celeron processors. DDR4-2400 memory. 10TB 7.2K SATA6Gbs HDD, 10TB 7.2K SAS12Gbs HDD, 900GB 15K 2.5" SAS

May 26, 2017 - Version 507

Additions in this update

- ▶ Update ThinkServer RD650/RD550 platform specifications, add DDR4-2400 RDIMM memory, up to 1.92TB easy-swap NVMe SSD, and up to 3.84TB NVMe flash adapter

April 19, 2017 - Version 505

Additions in this update

- ▶ Add ThinkServer TS460 models announced April 2017
- ▶ Add ThinkServer TD350 models announced April 2017
- ▶ Add ThinkServer TS150 models announced April 2017
- ▶ Update ThinkServer TS150 platform specifications, add new Kaby Lake processors, DDR4-2400 memory, 10TB hard drive supports

February 15, 2017 - Version 502

Additions in this update

- ▶ Add ThinkServer RS160 models announced September 2016

Withdrawals in this update

- ▶ ThinkServer TS140 had been end of life

October 12, 2016 - Version 496

Additions in this update

- ▶ New ThinkServer RS160 product announced September 2016
- ▶ New ThinkServer TS150 models announced August and October 2016

September 14, 2016 - Version 495

Additions in this update

- ▶ New ThinkServer RS160 product announced September 2016
- ▶ New ThinkServer TS140 models announced September 2016

April 6, 2016 - Version 487

Additions in this update

- ▶ New ThinkServer TD350, RD350, and RD450 models announced April 2016
- ▶ Add Intel Xeon E5-2600 v4 processors

March 23, 2016 - Version 486

Additions in this update

- ▶ New ThinkServer TS140 models announced March 2016

February 24, 2016 - Version 485

Additions in this update

- ▶ Add 8TB SATA and SAS 72K 6Gbs hard drive on ThinkServer RD350/RD450/RD550/RD650/TD350

December 30, 2015 - Version 483

Additions in this update

- ▶ Updates ThinkServer RS140, TD340 specifications
- ▶ Updates the most recent ThinkServer RS140, TD340 models

December 9, 2015 - Version 482

Additions in this update

- ▶ Updates ThinkServer TS140, TS440 specifications
- ▶ Updates the most recent ThinkServer TS140, TS440, RD350, RD450, RD550, RD650 models

October 28, 2015 - Version 480

Additions in this update

- ▶ New ThinkServer TS140 models announced October 2015

July 30, 2015 - Version 476

Additions in this update

- ▶ New ThinkServer TD350, RD550, and RD650 models announced July 2015

May 6, 2015 - Version 473

Additions in this update

- ▶ Add 95mm optical support on TD350
- ▶ Add Red Hat Enterprise Linux 7 support on RD350/RD450/RD550/RD650/TD350
- ▶ Add 32 x 25" bay support on TD350
- ▶ Add AnyBay and 25" PCIe SSD support on RD550/RD650

April 15, 2015 - Version 471

Additions in this update

- ▶ New ThinkServer TD350 models announced March 2015

March 25, 2015 - Version 470

Additions in this update

- ▶ New ThinkServer TS140 and TS440 models announced March 2015



ThinkServer RS160 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification																																					
Dimensions	1U rack. Height: 43.2 mm (1.7 in), width: 438.5 mm (17.26 in), depth: 393.7 mm (15.5 in)																																					
Weight	Minimum configuration: 6.2 kg (13.67 lb), maximum: 7.6 kg (16.76 lb)																																					
Processor	Supports one of the following Intel "Kaby Lake" processors:																																					
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Chipset	Intel C232 Platform Controller Hub (PCH)																																					
Memory DIMMs	4 DIMM sockets with 2-channels. UDIMM. DDR4-2133 or DDR4-2400																																					
Memory capacity	64GB (16GB x 4)																																					
Memory protection	ECC																																					
RAID controller	<table border="1"> <thead> <tr> <th>RAID controller</th> <th>Drive type</th> <th>RAID support</th> <th>Compatible models</th> </tr> </thead> <tbody> <tr> <td>Onboard RAID121i</td> <td>6Gbs SATA</td> <td>0/1/5/10</td> <td>2x3.5", 4x2.5"</td> </tr> <tr> <td>RAID520i PCIe</td> <td>12Gbs SAS/SATA</td> <td>0/1/10, 5 with optional key</td> <td>2x3.5", 4x2.5"</td> </tr> <tr> <td>RAID720i PCIe</td> <td>12Gbs SAS/SATA</td> <td>0/1/10/5, 6 with optional cache</td> <td>2x3.5", 4x2.5"</td> </tr> </tbody> </table>	RAID controller	Drive type	RAID support	Compatible models	Onboard RAID121i	6Gbs SATA	0/1/5/10	2x3.5", 4x2.5"	RAID520i PCIe	12Gbs SAS/SATA	0/1/10, 5 with optional key	2x3.5", 4x2.5"	RAID720i PCIe	12Gbs SAS/SATA	0/1/10/5, 6 with optional cache	2x3.5", 4x2.5"																					
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	Onboard RAID121i	6Gbs SATA	0/1/5/10	2x3.5", 4x2.5"																																		
RAID520i PCIe	12Gbs SAS/SATA	0/1/10, 5 with optional key	2x3.5", 4x2.5"																																			
RAID720i PCIe	12Gbs SAS/SATA	0/1/10/5, 6 with optional cache	2x3.5", 4x2.5"																																			
	Optional cache for RAID720i: 1GB memory. 1GB, 2GB, or 4GB flash with super capacitor.																																					
Disk drive bays	Supports two 3.5" or four 2.5" disk drive bays. Non-hot swap. Cables are connected to onboard SATA connectors or PCIe RAID controller. Also supports one M.2 SATA SSD																																					
Supporting storage	3.5" HDD, 7.2K SATA6Gbs	1TB/2TB/4TB/6TB/8TB/10TB/12TB																																				
	3.5" HDD, 7.2K SAS12Gbs	1TB/2TB/4TB/6TB/8TB/10TB																																				
	3.5" SSD, SATA6Gbs (2.5" SSD with 3.5" tray)	240GB/480GB/960GB																																				
	2.5" HDD, 7.2K SATA6Gbs	1TB/2TB																																				
	2.5" HDD, 10K SAS12Gbs	300GB/600GB/900GB/1.2TB/2.4TB																																				
	2.5" HDD, 15K SAS12Gbs	900GB																																				
	2.5" SSD, SATA6Gbs	120GB/240GB/480GB/960GB																																				
	M.2 SATA SSD	32GB/128GB																																				

Components	Specification	
Optical drive	Optional one 9.5mm optical. DVD-ROM or DVD±RW	
Network interfaces	One dedicated management port, two Gigabit Ethernet ports. Supports optional discrete network adapters via riser card	
Security features	Power-on and administrator password. Optional TPM, TCG 1.2 or 2.0 compliant.	
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, ID, disk drives, network, system. Supports the following management software: EasyStartup, Power Planner. On November 2016, EasyUpdate, Lenovo ThinkServer Diagnostics Standalone, ToolsCenter Suite CLI inventory module on ThinkServer, and Lenovo xClarity Administrator will be available	
Operating systems	Microsoft Windows Server 2016 (Standard and Essentials)/2012 R2/2012. Windows 10 Pro. Red Hat Enterprise Linux 6.7/6.8/7.2. SUSE Linux Enterprise Server 11/12. VMware vSphere (ESXi) 6.0U0/U2	
Base warranty	1 or 3-year limited onsite service with 9x5/NBD	
Power supply	One fixed 300 watts power supply, Non-hot swap. 80 PLUS Gold qualified	
Graphics	Onboard Aspeed AST2400	
Front ports	Two USB 2.0	
Rear ports	One VGA, four USB 3.0, one RJ-45 (dedicated mgmt), two ethernet, one serial (9-pin)	
Cooling	3 fans for processor, PCIe slot, and disk drives	
Noise emissions	Operating: < 5.9 Bels. Idle: < 5.2 Bels (Maximum configuration)	
Environmental specification	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)
	Temperature - non operating (with package)	-40 °C to 60 °C
	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)
	Humidity - operating	8%~80%, non-condensing
	Humidity - storage (with package)	10%~90%, non-condensing

Expansion slots and disk bays

Supports one PCIe slot via optional riser card, PCIe 3.0 x16, half length, half height

Core options for ThinkServer RS160 (partial)

ThinkServer 8GB 2RX8 PC4-2133-E CL15 DDR4-2133 ECC-UDIMM	4X70G88316
ThinkServer 16GB 2RX8 PC4-2133-E CL15 DDR4-2133 ECC-UDIMM	4X70G88317
ThinkServer 3.5" 8TB 7.2K Enterprise SATA 6Gbps 512e Hard Drive for RS-Series	4XB0K12297
ThinkServer 2.5" 1.2TB 10K Enterprise SAS 12Gbps Hard Drive for RS-Series	4XB0K12306
ThinkServer 2.5" 2TB 7.2K Enterprise SATA 6Gbps Hard Drive for RS-Series	4XB0K12302
ThinkServer 2.5" 480GB S3510 Enterprise Entry SATA 6Gbps SSD for RS-Series	4XB0K12321
ThinkServer M.2 32GB Value Read-Optimized SATA 6Gbps Solid State Drive	4XB0K12310
ThinkServer RAID 520i RAID 5 Upgrade	4XC0G88841
ThinkServer RS160 Slim SATA DVD-RW Optical Disk Drive	4XA0G88613
Lenovo ThinkServer Gen 5 Trusted Platform Module v1.2 (Worldwide except China)	4XF0G45868

Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Slots	TPM	OS	Warranty	Power Supply	Ann Date (m/y)
70TE000DUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TE000EUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TE000FUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TE000GUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TE000HUX	US	Xeon E3-1280 v5 4C/3.7GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TE000YUX	US	Xeon E3-1220 v6 4C/3.0GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x2.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TE0010UX	US	Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x2.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TE0011UX	US	Xeon E3-1240 v6 4C/3.7GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x2.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TE0012UX	US	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x2.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TE0013UX	US	Xeon E3-1280 v6 4C/3.9GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x2.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TER001UX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	1xHHHL	TPM	None	1-year	300W 85% Fixed	09/16
70TER002UX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	1xHHHL	TPM	None	1-year	300W 85% Fixed	09/16
70TER003UX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	4x2.5" NHS	Open	None	None	1xHHHL	TPM	None	1-year	300W 85% Fixed	09/16

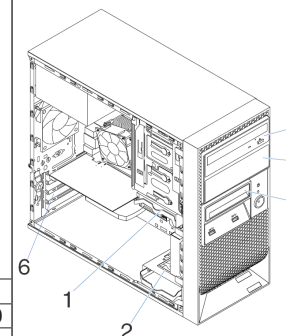
Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Slots	TPM	OS	Warranty	Power Supply	Ann Date (m/y)
70TG000JUX	US	Pentium G4400 2C/3.3GHz/3MB/54W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TG000KUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TG000LUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TG000MUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TG000NUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TG000PUX	US	Xeon E3-1280 v5 4C/3.7GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	None	TPM	None	1-year	300W 85% Fixed	09/16
70TG001RUX	US	Xeon E3-1220 v6 4C/3.0GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	2x3.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TG001SUX	US	Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	2x3.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TG001TUX	US	Xeon E3-1240 v6 4C/3.7GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	2x3.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TG001UUX	US	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	2x3.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TG001VUX	US	Xeon E3-1280 v6 4C/3.9GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	2x3.5" NHS	Open	None	None	None	TPM2.0	None	1-year	300W 85% Fixed	06/17
70TGR001UX	US	Pentium G4400 2C/3.3GHz/3MB/54W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	1xHHHL	TPM	None	1-year	300W 85% Fixed	09/16
70TGR002UX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	1xHHHL	TPM	None	1-year	300W 85% Fixed	09/16
70TGR003UX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	2x3.5" NHS	Open	None	None	1xHHHL	TPM	None	1-year	300W 85% Fixed	09/16

ThinkServer TS150 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification									
Dimensions	Tower or 4U rack. Height: 375 mm (14.76 in), width: 175 mm (6.89 in), depth: 431 mm (16.97 in)									
Weight	Maximum configuration: 27.6 lb (12.5kg)									
Processor	One Intel "Kaby Lake" or "Skylake" processor as listed: "Kaby Lake" processors:									
	Xeon E3-1280 v6 4C/3.9GHz/8MB/72W/DDR4-2400									
	Xeon E3-1275 v6 4C/3.8GHz/8MB/73W/DDR4-2400									
	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400									
	Xeon E3-1245 v6 4C/3.7GHz/8MB/73W/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 E3-1225 v6 4C/3.3GHz/8MB/73W/DDR4-2400									
	Xeon E3-1220 v6 4C/3GHz/8MB/72W/DDR4-2400									
	Core i3-7320 2C/4.1GHz/4MB/51W/DDR4-2400									
	Core i3-7300T 2C/3.5GHz/4MB/35W/DDR4-2400									
	Core i3-7300 2C/4GHz/4MB/51W/DDR4-2400									
	Core i3-7100T 2C/3.4GHz/3MB/35W/DDR4-2400									
	Core i3-7100 2C/3.9GHz/3MB/51W/DDR4-2400									
	Pentium G4620 2C/3.7GHz/3MB/51W/DDR4-2400									
	Pentium G4600T 2C/3GHz/3MB/35W/DDR4-2400									
	Pentium G4600 2C/3.6GHz/3MB/51W/DDR4-2400									
	Pentium G4560T 2C/2.9GHz/3MB/35W/DDR4-2400									
	Pentium G4560 2C/3.5GHz/3MB/54W/DDR4-2400									
	Celeron G3950 2C/3GHz/2MB/51W/DDR4-2133									
	Celeron G3930T 2C/2.7GHz/2MB/35W/DDR4-2133									
	Celeron G3930 2C/2.9GHz/2MB/51W/DDR4-2133									
	"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									
	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133									
	Xeon E3-1245 v5 4C/3.5GHz/8MB/80W/DDR4-2133									
	Xeon E3-1225 v5 4C/3.3GHz/8MB/80W/DDR4-2133									
	Core i3-6320 2C/3.9GHz/4MB/51W/DDR4-2133									
	Core i3-6300 2C/3.8GHz/4MB/51W/DDR4-2133									
	Core i3-6300T 2C/3.3GHz/4MB/35W/DDR4-2133									
	Core i3-6100 2C/3.7GHz/3MB/51W/DDR4-2133									
	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133									
	Pentium G4520 2C/3.6GHz/3MB/51W/DDR4-2133									
	Pentium G4500 2C/3.5GHz/3MB/51W/DDR4-2133									
	Pentium G4500T 2C/3GHz/3MB/35W/DDR4-2133									
	Pentium G4400 2C/3.3GHz/3MB/54W/DDR4-2133									
Pentium G4400T 2C/2.9GHz/3MB/35W/DDR4-2133										
Celeron G3920 2C/2.9GHz/2MB/51W/DDR4-2133										
Celeron G3900 2C/2.8GHz/2MB/51W/DDR4-2133										
Celeron G3900T 2C/2.6GHz/2MB/35W/DDR4-2133										
Chipset	Intel C236 Platform Controller Hub (PCH)									
Memory DIMMs	4 DIMM sockets with 2 channels, 2 DIMMs per channel. UDIMM. Up to DDR4-2400									
Memory capacity	64GB (16GB x 4)									
Memory protection	ECC									
RAID controller	<table border="1"> <thead> <tr> <th>RAID controller</th> <th>Drive type</th> <th>RAID support</th> </tr> </thead> <tbody> <tr> <td>Onboard RAID121i</td> <td>6Gbs SATA</td> <td>0/1/5/10</td> </tr> <tr> <td>RAID520i PCIe</td> <td>12Gbs SAS/SATA</td> <td>0/1/10, 5 with optional key</td> </tr> </tbody> </table>	RAID controller	Drive type	RAID support	Onboard RAID121i	6Gbs SATA	0/1/5/10	RAID520i PCIe	12Gbs SAS/SATA	0/1/10, 5 with optional key
RAID controller	Drive type	RAID support								
Onboard RAID121i	6Gbs SATA	0/1/5/10								
RAID520i PCIe	12Gbs SAS/SATA	0/1/10, 5 with optional key								
Disk bays	Supports up to four 3.5" or hybrid 3.5" + 2.5" disk drives, or up to five 2.5" disk drives, one 9.5mm optical (see right). Non-hot swap. Cables are connected to onboard SATA connectors or PCIe RAID controller. Supports one optional internal USB RDX Tape drive									
Supporting storage	<table border="1"> <tbody> <tr> <td>3.5" HDD, 7.2K SATA6Gbs</td> <td>500GB/1TB/2TB/3TB/4TB/5TB/6TB/10TB</td> </tr> <tr> <td>2.5" HDD, 7.2K SATA6Gbs</td> <td>500GB/1TB/2TB</td> </tr> <tr> <td>2.5" SSD, SATA6Gbs</td> <td>120GB/240GB/480GB/600GB/800GB/960GB</td> </tr> </tbody> </table>	3.5" HDD, 7.2K SATA6Gbs	500GB/1TB/2TB/3TB/4TB/5TB/6TB/10TB	2.5" HDD, 7.2K SATA6Gbs	500GB/1TB/2TB	2.5" SSD, SATA6Gbs	120GB/240GB/480GB/600GB/800GB/960GB			
3.5" HDD, 7.2K SATA6Gbs	500GB/1TB/2TB/3TB/4TB/5TB/6TB/10TB									
2.5" HDD, 7.2K SATA6Gbs	500GB/1TB/2TB									
2.5" SSD, SATA6Gbs	120GB/240GB/480GB/600GB/800GB/960GB									

Components	Specification	
SD module	Optional. Up to 2 SDHC flash cards via SD module, 8GB each	
Optical drive	Up to two half-height optical drives or one 9.5mm optical. DVD-ROM or DVD±RW	
Network interfaces	One Gigabit Ethernet port, Intel i219LM. Supports optional discrete network adapters via PCIe slots	
Security features	Power-on and administrator password. TPM (TCG 1.2-compliant)	
Systems management	UEFI, system LEDs, EasyStartup, EasyUpdate, Power Planner, and Diagnostics. Intel Active Management Technology 11 on models with Xeon processors. Intel Standard Manageability on models with Core i3, Pentium, or Celeron processors. KVM is supported on models with Xeon E3-12x5 v5 processors	
Operating systems	Microsoft Windows Server 2016/2012 R2/2012, Windows MultiPoint Server 2012, Windows 10 Pro. Red Hat Enterprise Linux 6.7/7.2. SUSE Linux Enterprise Server 11/12. VMware vSphere (ESXi) 5.5U3/6.0U2	
Base warranty	1 or 3-year limited onsite service with 9x5/NBD	
Power supply	Supports one of the following: • One fixed 250 watts, autosensing, 85%, 80 PLUS Bronze qualified • One fixed 400 watts, autosensing, 92%, 80 PLUS Platinum qualified	
Graphics	Integrated Intel HD Graphics on Xeon E3-12x5 v5, Core i3, Pentium, and Celeron processors. Uses main memory, works along with discrete graphics to support multi-display, enables two display connectors (1 DP, 1 VGA) on rear ports. Also supports the following discrete graphics adapter options: • NVIDIA Quadro NVS 315, 1GB • NVIDIA Quadro K620, 2GB	
HD Audio	Realtek ALC662 codec	
Front ports	Two USB 3.0	
Rear ports	One VGA, one DisplayPort, six USB 3.0, one RJ-45, one serial (9-pin), three analog audio ports (line-in, line-out, mic-in). Optional parallel or serial ports via PCIe adapters	
Noise emissions	Operating: < 35 dB(A). Idle: < 34 dB(A) (Maximum configuration)	
Environmental specification	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)
	Temperature - non operating (with package)	-40 °C to 60 °C
	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)
	Humidity - operating	8%-80%, non-condensing
	Humidity - storage (with package)	10%-90%, non-condensing



Note:
1. PCIe cards are optional.
2. Disk tray comes with the disk drive.

Disk Bays and PCIe Slots			
	4 x 3.5"	5 x 2.5"	4 x hybrid 3.5" + 2.5"
Bay 1	1st HDD bay	1st HDD bay	1st HDD bay, 3.5"/2.5"
Bay 2	2nd HDD bay	2nd HDD bay	2nd HDD bay, 3.5"/2.5"
Bay 3	Not supported	3rd HDD bay	Not supported on standard models. Supports one 2.5" disk drive for special bid only
Bay 4	2nd half-height optical, or RDX tape drive, or 3rd HDD bay	2nd half-height optical, or RDX tape drive, or 4th HDD bay	2nd half-height optical, or RDX tape drive, or 3rd HDD bay (3.5"/2.5")
Bay 5	1st half-height optical, or 9.5mm optical + 4th HDD bay	1st half-height optical, or 9.5mm optical + 5th HDD bay	1st half-height optical, or 9.5mm optical + 4th HDD bay (3.5"/2.5")
6	Four PCIe slots (top-down): Slot 1: PCIe 3.0 x16, full height, half length (near CPU) Slot 2: PCIe 3.0 x1, full height, half length Slot 3: PCIe 3.0 x16 (x4 elec), full height, half length Slot 4: PCIe 3.0 x1, full height, half length		

ThinkServer TS150 - TopSeller - 70LV

Product Specifications Reference (PSREF)

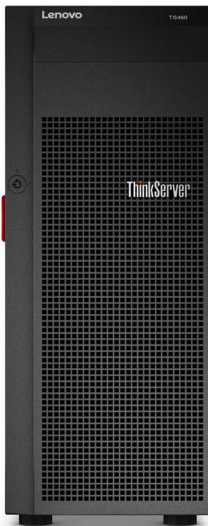
Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Add-on Ports	System Mgmt	OS	Warranty	Power Supply	Ann Date (m/y)
70LV002XUX	US	Xeon E3-1225 v5 4C/3.3GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV002YUX	US	Xeon E3-1245 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0030UX	US	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0031UX	US	Xeon E3-1225 v5 4C/3.3GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0032UX	US	Xeon E3-1245 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0033UX	US	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0034UX	US	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC/3 available	Open	HH DVD±RW	None	None	ISM	None	1-year	Fixed 250W Bronze	08/16
70LV0035UX	US	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	ISM	None	1-year	Fixed 250W Bronze	08/16
70LV0036UX	US	Xeon E3-1225 v5 4C/3.3GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0037UX	US	Xeon E3-1245 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0038UX	US	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV0039UX	US	Xeon E3-1225 v5 4C/3.3GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV003AUX	US	Xeon E3-1245 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16
70LV003BUX	US	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	08/16

Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Add-on Ports	System Mgmt	OS	Warranty	Power Supply	Ann Date (m/y)
70LX0017UX	US	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 400W Platinum	08/16
70LX0018UX	US	Xeon E3-1275 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID 121i	Up to 5x2.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 400W Platinum	08/16

ThinkServer TS150 - TopSeller - 70UB

Product Specifications Reference (PSREF)

Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Add-on Ports	System Mgmt	OS	Warranty	Power Supply	Ann Date (m/y)
70UB0009UX	US	Xeon E3-1225 v6 4C/3.3GHz/8MB/73W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	04/17
70UB000AUX	US	Xeon E3-1225 v6 4C/3.3GHz/8MB/73W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	04/17
70UB000BUX	US	Xeon E3-1245 v6 4C/3.7GHz/8MB/73W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	04/17
70UB000CUX	US	Xeon E3-1245 v6 4C/3.7GHz/8MB/73W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	04/17
70UB000DUX	US	Xeon E3-1275 v6 4C/3.8GHz/8MB/73W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	AMT	None	1-year	Fixed 250W Bronze	04/17
70UB000EUX	US	Xeon E3-1275 v6 4C/3.8GHz/8MB/73W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	9.5mm DVD±RW	None	None	AMT	None	1-year	Fixed 250W Bronze	04/17
70UB001WUX	US	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC/3 available	Open	HH DVD±RW	None	None	ISM	None	1-year	Fixed 250W Bronze	04/17
70UB001XUX	US	Core i3-6100T 2C/3.2GHz/3MB/35W/DDR4-2133	1x8GB UDIMM DDR4-2400 ECC	RAID 121i	Up to 4x3.5" DC	Open	None	None	None	ISM	None	1-year	Fixed 250W Bronze	04/17

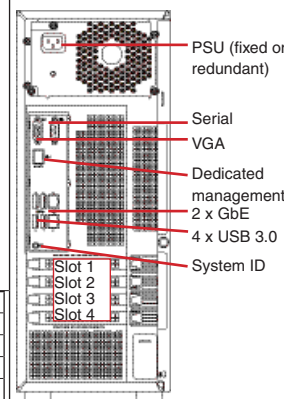


ThinkServer TS460 Platform Specifications

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
	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
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 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.

Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Add-on Ports	System Management	Operating System	Warranty	Power Supply	Ann Date (mm/yy)
70TR000LUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000MUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000NUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000PUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000QUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000RUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000SUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000TUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000UUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" NHS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000VUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" NHS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000WUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" NHS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000XUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" NHS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR000YUX	US	Pentium G4400 2C/3.3GHz/3MB/54W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" NHS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	02/17
70TR0016UX	US	Xeon E3-1220 v6 4C/3.0GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17
70TR0017UX	US	Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17
70TR0018UX	US	Xeon E3-1240 v6 4C/3.7GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17
70TR0019UX	US	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17

Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Add-on Ports	System Management	Operating System	Warranty	Power Supply	Ann Date (mm/yy)
70TR001AUX	US	Xeon E3-1220 v6 4C/3.0GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17
70TR001BUX	US	Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17
70TR001CUX	US	Xeon E3-1240 v6 4C/3.7GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17
70TR001DUX	US	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	Fixed 300W Bronze	06/17

Model	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	Optical	Add-on NIC	Add-on Ports	System Management	Operating System	Warranty	Power Supply	Ann Date (mm/yy)
70TT000JUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000KUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000LUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000MUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000NUX	US	Xeon E3-1220 v5 4C/3.0GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000PUX	US	Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000QUX	US	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT000RUX	US	Xeon E3-1270 v5 4C/3.6GHz/8MB/80W/DDR4-2133	1x8GB UDIMM DDR4-2133 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	02/17
70TT001YUX	US	Xeon E3-1220 v6 4C/3.0GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0020UX	US	Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0021UX	US	Xeon E3-1240 v6 4C/3.7GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0022UX	US	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID121i	4x3.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0023UX	US	Xeon E3-1220 v6 4C/3.0GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0024UX	US	Xeon E3-1230 v6 4C/3.5GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0025UX	US	Xeon E3-1240 v6 4C/3.7GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17
70TT0026UX	US	Xeon E3-1270 v6 4C/3.8GHz/8MB/72W/DDR4-2400	1x8GB UDIMM DDR4-2400 ECC	RAID520i	8x2.5" HS	Open	Open	None	None	TPM 2.0	None	1-year	1x450W Gold	06/17

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Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

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Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

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