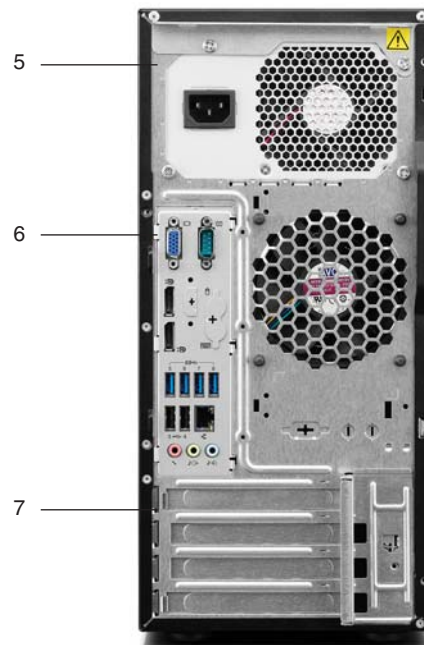


ThinkServer® TS140 - Overview



Front view

1. Optional slim optical + 3.5" drive bay in standard 5.25" bay
2. Optional 3.5" hard drive bay
3. Power Button
4. Front I/O: 2 USB 3.0 (blue)



Rear view

5. Power Supply:
280 watts 80 PLUS Bronze/450 watts 80 PLUS Platinum
6. Rear I/O: 2 USB 2.0
4 USB 3.0 (blue)
1 serial (9-pin)
1 RJ-45 (GbE)
1 line-in
1 line-out
1 microphone-in
2 DisplayPort (for Intel HD Graphics)
1 VGA (for Intel HD Graphics)
7. 1 PCIe 3.0 x16
1 PCIe 2.0 x1
1 PCIe 2.0 x16 (x4 elec)
1 PCI

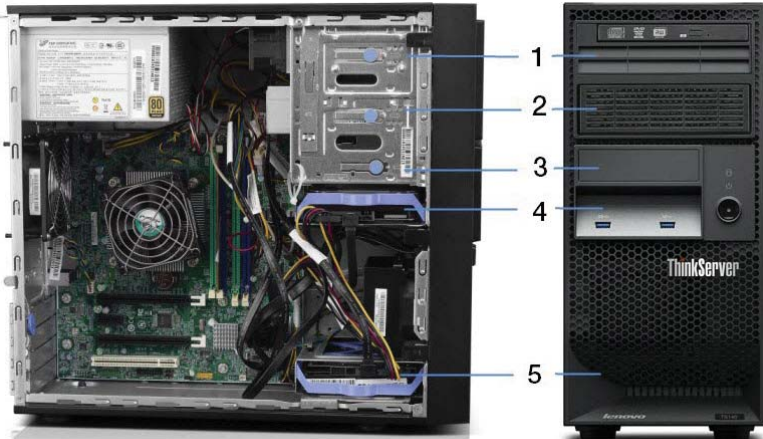
Internal

- One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core-i3 4000, and Pentium families
- 4 DIMM sockets, supports up to 32GB ECC UDIMM memory
- Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard

Mechanical

- Raven black color; metal case
- Rack-mountable to 5U
- 6.89"W x 16.97"D x 14.76"H
- 175mm W x 431mm D x 375mm H
- 28.66 lb (13kg) max configuration
- 25-liter

ThinkServer® TS140 Platform Specifications - I of III

Components	Specification																																																																																																																																																
Form factor	Tower, rack-mountable to 5U via ThinkServer Tower to Rack Shelf Conversion Kit (<i>Option PN: 0C19515</i>)																																																																																																																																																
Chipset	Intel C226 Chipset																																																																																																																																																
Systems management	<ul style="list-style-type: none"> • Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors) • EasyStartup • EasyUpdate 																																																																																																																																																
Processor	<p>One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core-i3 4000, and Pentium G3000 families, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors.</p> <p>The following processors are supported:</p> <table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Clock Speed</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory speed</th> <th>ECC Memory Supported</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr><td>Xeon E3-1285 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4700</td></tr> <tr><td>Xeon E3-1280 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr> <tr><td>Xeon E3-1275 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr> <tr><td>Xeon E3-1270 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr> <tr><td>Xeon E3-1245 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr> <tr><td>Xeon E3-1240 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr> <tr><td>Xeon E3-1230 v3</td><td>4</td><td>8</td><td>3.3 GHz</td><td>3.7 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr> <tr><td>Xeon E3-1225 v3</td><td>4</td><td>4</td><td>3.2 GHz</td><td>3.6 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr> <tr><td>Xeon E3-1220 v3</td><td>4</td><td>4</td><td>3.1 GHz</td><td>3.5 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr> <tr><td>Core i3-4340</td><td>2</td><td>4</td><td>3.6 GHz</td><td></td><td>4 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr> <tr><td>Core i3-4330</td><td>2</td><td>4</td><td>3.5 GHz</td><td></td><td>4 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr> <tr><td>Core i3-4130</td><td>2</td><td>4</td><td>3.4 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4400</td></tr> <tr><td>Pentium G3430</td><td>2</td><td>2</td><td>3.3 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics</td></tr> <tr><td>Pentium G3420</td><td>2</td><td>2</td><td>3.2 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics</td></tr> <tr><td>Pentium G3220</td><td>2</td><td>2</td><td>3 GHz</td><td></td><td>3 MB</td><td>DDR3-1333</td><td>Yes</td><td>Intel HD Graphics</td></tr> </tbody> </table> <p><i>Notes:</i> All information is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/</p>	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics	Xeon E3-1285 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4700	Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes		Core i3-4340	2	4	3.6 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Core i3-4330	2	4	3.5 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Core i3-4130	2	4	3.4 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics 4400	Pentium G3430	2	2	3.3 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics	Pentium G3420	2	2	3.2 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics	Pentium G3220	2	2	3 GHz		3 MB	DDR3-1333	Yes	Intel HD Graphics
Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics																																																																																																																																									
Xeon E3-1285 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4700																																																																																																																																									
Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																																																																									
Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																																																																									
Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																																																																									
Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Core i3-4340	2	4	3.6 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Core i3-4330	2	4	3.5 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Core i3-4130	2	4	3.4 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics 4400																																																																																																																																									
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Pentium G3220	2	2	3 GHz		3 MB	DDR3-1333	Yes	Intel HD Graphics																																																																																																																																									
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available																																																																																																																																																
Memory DIMM sockets	Four 240-pin DIMM sockets																																																																																																																																																
Memory capacity	Up to 32GB (8GBx4)																																																																																																																																																
Memory protection	ECC																																																																																																																																																
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs 																																																																																																																																																
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support																																																																																																																																																
Drive bays	<p>Supports one 5.25" optical and two 3.5" disk drive bays in standard models, direct cable, no hot-swap up to one slim optical and four 3.5"/2.5" disk drive bays (pending 2.5" disk drives availability):</p>  <p>1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay 3: Optional 3rd 2.5" drive bay 4: Standard 3.5"/2.5" primary drive bay 5: Standard 3.5"/2.5" 2nd drive bay</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> • Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only • Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional 3.5" 3rd hard drive bay (Bay 2) • Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently on one model. 																																																																																																																																																

ThinkServer® TS140 Platform Specifications - II of III

Components	Specification		
Optical	Supports DVD±RW or DVD ROM, 1.6" high or slim, SATA interface		
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB 		
Front ports	Two USB 3.0 (blue)		
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
Expansion Slots	Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3		
Onboard Ethernet	One onboard gigabit ethernet, Intel I217		
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45) 		
Keyboard/mouse	None (use USB port)		
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85% PSU, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92% PSU, 80 PLUS Platinum qualified 		
Security	<ul style="list-style-type: none"> Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all) 		
Mechanical	<ul style="list-style-type: none"> Raven black color; metal case 6.89"W x 16.97"D x 14.76"H 175mm W x 431mm D x 375mm H 28.66 lb (13kg) max configuration 25-liter 		
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons 		
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified RoHS-compliant 		
EMC	FCC Class A		
240VA	Supports		
Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)		
Temperature - non operating (no package)	-10 °C to 60 °C		
Temperature - non operating (with package)	-40 °C to 70 °C		
Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)		
Humidity - operating	10%~80%, non-condensing		
Humidity - non operating (no package)	10%~90%, non-condensing		
Humidity - non operating (with package)	10%~90%, non-condensing		
Acoustic noise (idle/working mode)	Category	Min Configuration	Best Configuration
	CPU	1 CPU	1 CPU
	Optical Drive	0 DVD	1 DVD
	Drive Bays	Up to one	Up to three
	HDD	1x 500GB SATA	3x 500GB SATA
	Memory	1x 2GB UDIMM	1x 2GB UDIMM
	PSU	280W	450W
	RAID	Embedded SATA	Embedded RAID
	Add-on card	No	1xVGA
	Sound Pressure (operating)	26 dB(A)	35 dB(A)
Sound Pressure (idle)	25 dB(A)	34 dB(A)	

ThinkServer® TS140 Platform Specifications - III of III

Components	Specification
Warranty	1 or 3-year limited warranty, parts and labor, more services information see S-TS1 and S-TS3 sheet
Preloaded operating systems	<ul style="list-style-type: none">• Windows Server® 2012 Foundation• Windows Server 2012 Essentials• Windows Server 2012 Standard
Supported operating systems and virtualization software	<ul style="list-style-type: none">• Windows 7• Windows 8• Windows Server 2008 R2 Standard• Windows Server 2008 R2 Enterprise• Windows Small Business Server 2011 Essentials• Windows Small Business Server 2011 Standard• Windows Small Business Server 2011 Premium Add-On <p><i>Notes:</i> 1. Supported only, no preloaded models 2. Windows 7 and Windows 8 are not supported by EasyStartup</p>

ThinkServer® TS140 (70A4) - TopSeller (September 2013)


Personal Systems Reference (PSREF)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A4001LUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001MUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	1x500GB 3.5" SATA (3x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001NUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001PUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001QUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	RAID 1	2x500GB 3.5" SATA	Slim DVD	No	No	280W	No	Foundation	1
70A4001RUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	RAID 1	2x500GB 3.5" SATA (3x3.5" Bay)	Slim DVD	No	No	280W	No	Essentials	1
70A4001SUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	1x1TB 3.5" SATA (3x3.5" Bay)	Slim DVD	No	No	280W	No	No	1


* Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



Left



Front

Drive bays

- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
- 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
- 3: Optional 3rd 2.5" drive bay
- 4: Standard 3.5"/2.5" primary drive bay
- 5: Standard 3.5"/2.5" 2nd drive bay

Notes:

- Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only
- Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional hard drive bay (Bay 2)
- Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently in same model.

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
- Slot 2: half-length, full-height, PCIe 2.0 x1
- Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
- Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

See footnotes for important warranty information
Model(s) announced September 10, 2013

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(70A4-1) September 2013

ThinkServer® TS140 (70A5) - TopSeller (September 2013)

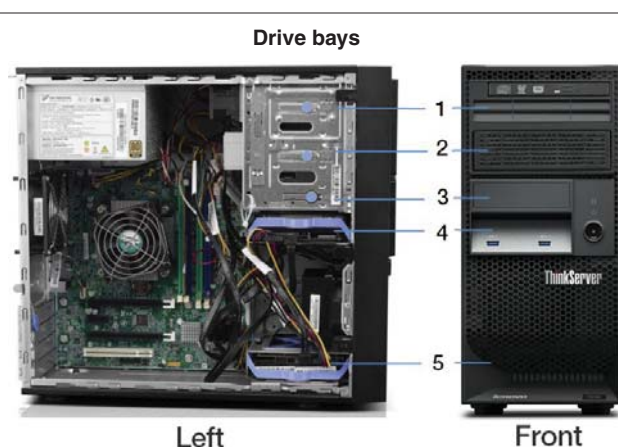
Personal Systems Reference (PSREF)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A5000BUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	450W	No	No	1

* Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
 3: Optional 3rd 2.5" drive bay
 4: Standard 3.5"/2.5" primary drive bay
 5: Standard 3.5"/2.5" 2nd drive bay

Notes:

- Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only
- Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional hard drive bay (Bay 2)
- Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently in same model.

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
 Slot 4: half-length, full-height, PCI 2.3

Security

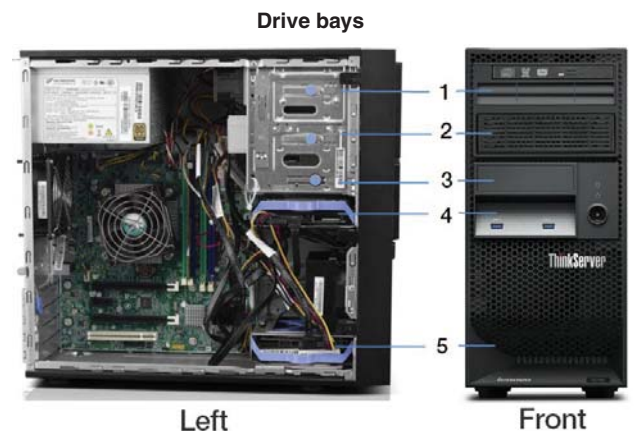
- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage (Drive bays)	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A00003US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	2GBx4	Intel HD 4600	RAID 0	4x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	1xParallel	1x350-T2	280W	No	Foundation	1
70A00006US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	2GBx4	Intel HD 4600	RAID 0	4x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	2xIntel CT	280W	No	Foundation	1
70A00009UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000AUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000BUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000CUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	No	1x500GB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000DUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	RAID 1	2x500GB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Foundation	1

¹ Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter(2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
- Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
- Optional 3rd 2.5" drive bay
- Standard 3.5"/2.5" primary drive bay
- Standard 3.5"/2.5" 2nd drive bay

Notes:

- Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only
- Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional hard drive bay (Bay 2)
- Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently in same model.

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
- Slot 2: half-length, full-height, PCIe 2.0 x1
- Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
- Slot 4: half-length, full-height, PCI 2.3

Security

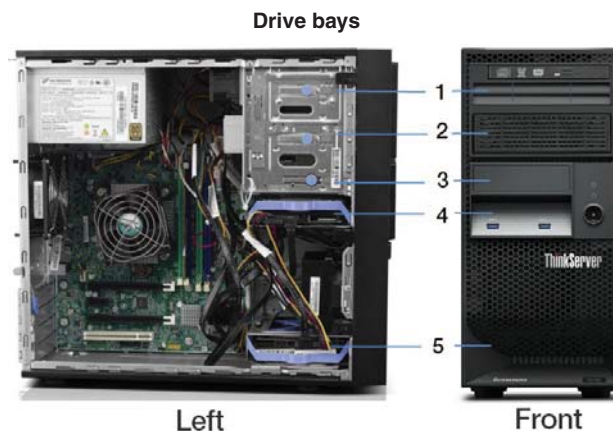
- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A0000EUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	RAID 1	2x500GB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Essentials	1
70A0000FUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD 4600	RAID 1	2x500GB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Standard	1
70A0000GUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000HUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000JUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	No	Open (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000KUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	RAID 1	2x1TB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Foundation	1
70A0000LUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	RAID 1	2x1TB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Essentials	1

* Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter(2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
- 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
- 3: Optional 3rd 2.5" drive bay
- 4: Standard 3.5"/2.5" primary drive bay
- 5: Standard 3.5"/2.5" 2nd drive bay

Notes:

- Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only
- Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional hard drive bay (Bay 2)
- Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently in same model.

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
- Slot 2: half-length, full-height, PCIe 2.0 x1
- Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
- Slot 4: half-length, full-height, PCI 2.3

Security

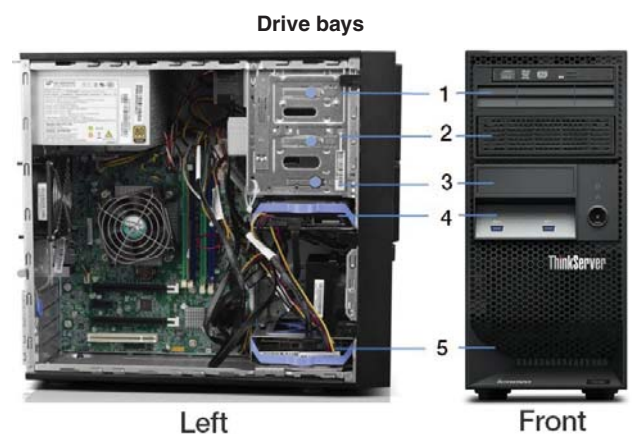
- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A0000MUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	RAID 1	2x1TB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Standard	1
70A0000NUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD 4600	No	2x2TB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	1x350-T2	280W	No	No	3
70A0000PUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx2	Intel HD 4600	No	2x2TB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	1x350-T2	280W	No	No	3
70A0000QUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	Intel HD 4600	No	2x2TB 3.5" SATA (3x3.5" Bay)	Slim DVD±RW	No	1x350-T2	280W	No	No	3

* Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter(2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: OC19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89" x 16.97" x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
- 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
- 3: Optional 3rd 2.5" drive bay
- 4: Standard 3.5"/2.5" primary drive bay
- 5: Standard 3.5"/2.5" 2nd drive bay

Notes:

- Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only
- Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional hard drive bay (Bay 2)
- Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently in same model.

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
- Slot 2: half-length, full-height, PCIe 2.0 x1
- Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
- Slot 4: half-length, full-height, PCI 2.3

Security

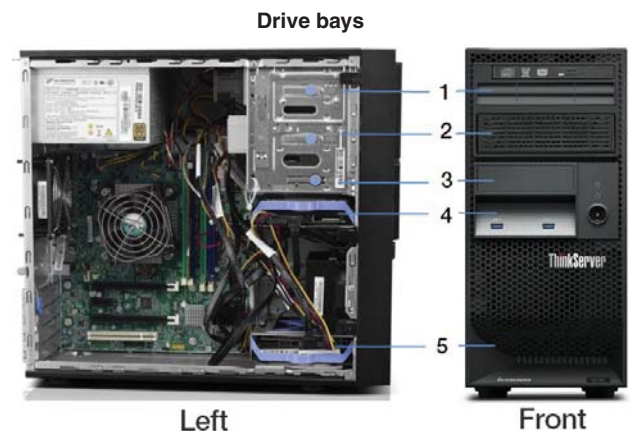
- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A10000US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	NVS 300	RAID 10	4x4TB 3.5 SATA (4x3.5" Bay)	Slim DVD±RW	1xParallel	2xIntel CT	450W	No	Foundation	1
70A10001US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	Quadro 600	RAID 10	4x2TB 3.5 SATA (4x3.5" Bay)	Slim DVD±RW	No	1xIntel CT	450W	No	Foundation	1

* Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter(2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
 3: Optional 3rd 2.5" drive bay
 4: Standard 3.5"/2.5" primary drive bay
 5: Standard 3.5"/2.5" 2nd drive bay

Notes:

- Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only
- Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional hard drive bay (Bay 2)
- Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently in same model.

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
 Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)