

Personal Systems Reference Lenovo® ThinkServer™ Servers 2008 to present - withdrawn

August 2011 - Version 404



Lenovo ThinkServer 200 Series Family

ThinkServer.





Lenovo ThinkServer TS100 with 400W non-redundant power supply



Lenovo ThinkServer TS100 with simple-swap disks



Lenovo ThinkServer TS100 with 430W redundant power supply



Lenovo ThinkServer TS100







Lenovo ThinkServer TS100

Name	Type- model	Slot x bay	Processor	GHz	Cores	Memory	Disk(s)	Disk size	Disk connection	Disk type	RAID controller	SATA optical	Power supply		Workhor Global	
TS100	6432-17U	4x7	E7400	2.80	2	1 x 1GB	None	3.5"	4 x Simple-swap	SATA	1064E	DVD	400W	1-vear	No	Sep 08

- T = Tower, S = Single processor
 High performance server with rock solid technology and proven hardware design
 Easy to use with ThinkServer EasyStartup and EasyManage software
 This small and medium business (SMB) model is part of the US TopSeller™ Program

Processor	One Intel® Core™ 2 Duo Processor E7400 with dual-core, one maximum, 1066MHz system bus, and 3MB L2 cache	Tower Optical I
Implementation	Processor uses FC-LGA8 package, one LGA775 socket	Business black color; metal case
Memory	1GB std, 8GB max, PC2-6400 800MHz DDR2 , ECC , dual-channel capable, four 184-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets available	8.5"W x 21.25"D x 17.25"H 216mm W x 540mm D x 438mm H 56 lb (25.2kg) max configuration Toolless side cover removal
Graphics	ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.2, 16MB, external monitor port (VGA DB-15); Maximum resolution: 1024x768@85Hz	Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons
Diskette SATA DVD SATA disk(s)	None (use USB port) DVD-ROM, SATA 1.5Gb/s, uses ICH9R None	Rack shelf support
SATA controller SATA connectors	Serial ATA, SATA 3.0Gb/s, integrated in ICH9R, not used by disks Six SATA connectors on planar, four simple-swap connectors on 3.5" disk backplate	Bay ① 5.25", 1.6" high, external, standard optical Bay ② 5.25", 1.6" high, external, optional optical Bay ③ 3.5", 1" high, external, open
SATA RAID cont SAS disk	LSI™ 1064E, SATA 3.0 Gb/s, RAID ⁸ 0, 1 support, Mini PCI Express® adapter	Bay ④ 3.5", 1" high, internal, optional SATA disk Bay ⑤ 3.5", 1" high, internal, optional SATA disk Bay ⑥ 3.5", 1" high, internal, optional SATA disk
SAS connectors SAS controller	Not supported Not supported Not supported	Bay ② 3.5", 1" high, internal, optional SATA disk
Chipset	Intel 3210 Chipset, Intel I/O Controller Hub 9 RAID (ICH9R) for RAID 0, 1, 10 support, SMSC® SCH5027D Super I/O	Slot 1: full-length, full-height, PCIe x8 Slot 2: full-length, full-height, PCIe x1 (x4 mechanical) Slot 3: full-length, full-height, 64-bit PCI-X (not enabled)
Front ports Rear ports	Two USB 2.0 Four USB 2.0, two serial (9-pin), parallel, ethernet (RJ-45), monitor (VGA DB-15)	Slot 4: full-length, full-height, 32-bit PCI 2.2 Slot 5: half-length, full-height, 32-bit PCI 2.2
Diagnostics	Diagnostic LEDs (system-error LED on front cover; error LEDs for fans, disks, memory, processor, PCI slots, power supply)	Security
Systems mgmt Audio	System management utility, baseboard management controller, IPMI 2.0-compliant	Side cover lock (ships with two identical keys) prohibits removal of front panel and disks
Speaker Ethernet	None Internal speaker Gigabit ethernet on planar, Broadcom® BCM5722, PCIe x1	Power-on password Administrator password
Keyboard Mouse Power supply Cooling	None (use USB port) None (use USB port) One 400 watts, one maximum, non-redundant, variable speed fan, non-hot-swap, universal Three fans (processor, rear, disks)	Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)
	που ιαπο (ρ. σοσσοσι, τοαπ, αποπο)	Software management tools
	DDR2 ECC UDIMM 45J6188 DDR2 ECC UDIMM 45J6189	ThinkServer EasyStartup ThinkServer EasyManage
250GB 3.5" Sin	nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6195 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6196 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6197	ThinkPlus Priority Support, 90-day Trial
750GB 3.5" Sin	nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6198	RoHS-compliant
Onlei accessor	ies at lenovo.com /accessories	Limited Warranty¹ 2 1-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)³ Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378

Name	Type- model	Slot x bay	rocessoi	GHz	Cores	Memory	Disk(s)	Disk size	Disk connection	Disk type		SATA optical	Power supply(s)	Limited W Warranty ¹	
									4 x Simple-swap 4 x Hot-swap		1064E 4 MR10i		400W 2 x 430W	3-year 3-year	Sep 08 Sep 08

- T = Tower, S = Single processor
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 Easy to use with ThinkServer EasyStartup and EasyManage software
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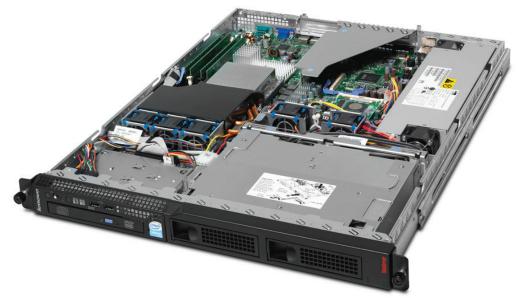
Processor Implementation	One Intel® Xeon® Processor E3110 with dual-core, one maximum, 1333MHz system bus, and 6MB L2 cache or One Intel Xeon Processor X3360 with quad-core, one maximum, 1333MHz system bus, and 12MB L2 cache Processor uses FC-LGA8 package, one LGA775 socket	Tower Business black color; metal case 8.5"W x 21.25"D x 17.25"H 216mm W x 540mm D x 438mm H
Memory	2GB or 4GB std, 8GB max, PC2-6400 800MHz DDR2 , ECC , dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in two sockets; two sockets available	56 lb (25.2kg) max configuration Toolless side cover removal Toolless disk and optical drive removal Toolless destar reteation Toolless disk and optical drive removal
Graphics	ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.2, 16MB, external monitor port (VGA DB-15); Maximum resolution: 1024x768@85Hz	Illuminated front icons Rack shelf support
	None (use USB port) DVD-ROM, SATA 1.5Gb/s, uses ICH9R None Serial ATA, SATA 3.0Gb/s, integrated in ICH9R, not used by disks Six SATA connectors on planar, 13U SATA: 4 simple-swap connectors on 3.5" disk backplate 15U SATA/SAS: 4 hot-swap connectors on 3.5" disk backplane LSIM 1064E, SATA 3.0 Gb/s, RAID® 0, 1 support,	Bay ① 5.25", 1.6" high, external, standard optical Bay ② 5.25", 1.6" high, external, optional optical Bay ③ 3.5", 1" high, internal, optional disk Bay ⑤ 3.5", 1" high, internal, optional disk internal, optional disk Bay ⑦ 3.5", 1" high, internal, optional disk optional disk optional disk
SAS disk(s) SAS connectors SAS RAID cont	Mini PCI Express® adapter None 15U SATA/SAS: 4 hot-swap connectors on 3.5" disk backplane 15U: LSI MR10i, SATA 3.0 Gb/s, SAS 3.0 Gb/s, RAID® 0, 1, 5, 6, 10, 50, 60 support, Mini PCI Express adapter	Slot 1: full-length, full-height, PCle x8 Slot 2: full-length, full-height, PCle x1 (x4 mechanical) Slot 3: full-length, full-height, 64-bit PCl-X (not enabled) Slot 4: full-length, full-height, 32-bit PCl 2.2
Chipset	Intel 3210 Chipset, Intel I/O Controller Hub 9 RAID (ICH9R) for RAID 0, 1, 10 support, SMSC® SCH5027D Super I/O	
Front ports Rear ports Diagnostics Systems mgmt Audio Speaker	Two USB 2.0 Four USB 2.0, two serial (9-pin), parallel, ethernet (RJ-45), monitor (VGA DB-15) Diagnostic LEDs (system-error LED on front cover; error LEDs for fans, disks, memory, processor, PCI slots, power supply) System management utility, baseboard management controller, IPMI 2.0-compliant None Internal speaker	Security • Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control
Ethernet Keyboard Mouse Power supply Cooling	Gigabit ethernet on planar, Broadcom® BCM5722, PCle x1 None (use USB port) None (use USB port) Some: One 400 watts, one maximum, non-redundant, variable speed fan, non-hot-swap, universal Some: Two 430 watts, two maximum, redundant with two, variable speed fan, hot-swap, universal Three fans (processor, rear, disks)	USB port disablement (all) Software management tools ThinkServer EasyStartup ThinkServer EasyManage ThinkPlus Priority Support, 90-day Trial
Accessories	(1000000)	RoHS-compliant
2GB PC2-6400 160GB 3.5" Sim 250GB 3.5" Sim 500GB 3.5" Sim 750GB 3.5" Sim 250GB 3.5" Hot 500GB 3.5" Hot 750GB 3.5" Hot 1TB 3.5" Hot-sw 146GB 3.5" Hot	DDR2 ECC UDIMM 45J6188 DDR2 ECC UDIMM 45J6189 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6196 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6197 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6197 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6197 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6201 n-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6201 n-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6202 n-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6203 nap SATA 3.0Gb/s Disk (7200 rpm) 45J6204 n-swap SAS 3.0Gb/s Disk (7200 rpm) 45J6204 n-swap SAS 3.0Gb/s Disk (7500 rpm) 45J6211 nies at lenovo.com/accessories	Limited Warranty¹ 3-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)³ Post warranty maintenance services 4 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378







Lenovo ThinkServer RS110



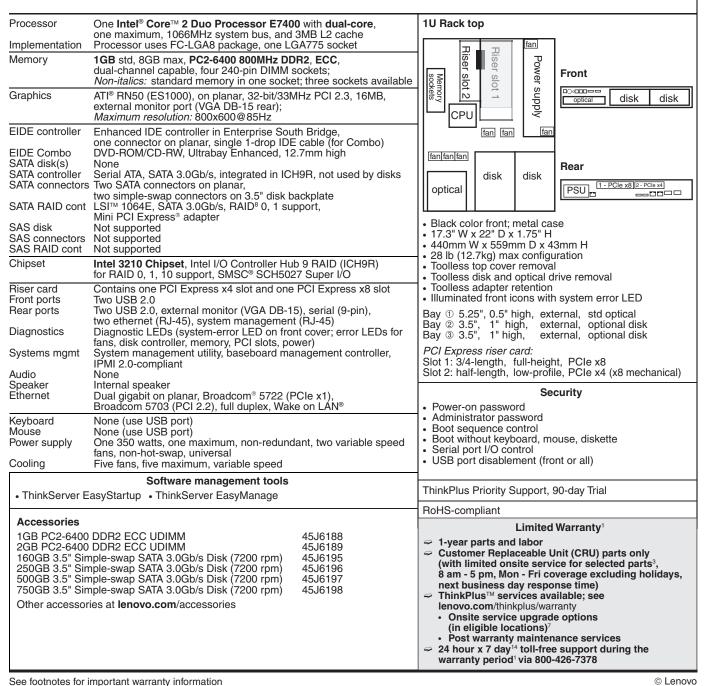
Lenovo ThinkServer RS110



Lenovo ThinkServer RS110

Slot x Disk Disk RAID Power Limited Workhorse Avail Type-Name bay model Processor GHz Cores Memory Disk(s) size connection type controller optical supply Fans warranty¹ Global RS110 6436-15U 2x3 E7400 2.80 2 1 x 1GB None 3.5" 2 x Simple-swap SATA 1064E Combo 350W 5 1-year No Sep 08

- R = Rack, S = Single processor
- Easy to use with ThinkServer EasyStartup and EasyManage software
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Type- Name model	Slot x bay	Processor	GHz	Core	s Memor	/ Disk	Disk s) size		Disk onnection	Disk type	RAID controlle		Power supply		Limited warranty	Workhors Global	
RS110 6438-13 RS110 6438-1		E3110 X3360	3.00 2.83	2 4	1 x 2GI 2 x 2GI	3 Non 3 Non	e 3.5' e 2.5	" 2 x : " 4 x l	Simple-swap Hot-swap	SATA SAS	1064E MR10i	Combo	350W 350W	5 1 5	3-year 3-year		Sep 08 Sep 08
	• Hig	y to use wi	nce se th Thii	rver nkSe	with roc rver Eas	yStart	ıp and	l Easy	and proven Manage soft e part of the	tware	,		n				
Processor		ntel® Xeon								1U	Rack to	p					
	One I	naximum, 1: ntel Xeon l	Proces	ssor	X3360 v	vith qu	ad-co	re,			. כב	. I	fan	Fro	nt on 2.5	" disk m	odels
Implementation		naximum, 1: ssor uses F									liser	iser	Pov			disk	disk
Memory		or 4GB std,							ECC,	sockets	Riser slot 2	Riser slot 1	Power supply		ptical	disk	disk
	Non-i	channel cap talics: stanc	lard m	emo	ry in one					ets	` _=		l g				
Graphics		or two sock RN50 (ES10				hit/33N	MHz Po	CI 2 3	16MB	\dashv \vdash	CPU		l `_		nt on 3.5	" alsk m	ioaeis
агартноо	exterr	nal monitor num resolu	port (\	/GA	DB-15 r	ear);	11 12 1 1	01 2.0,	, TOIVID,	1	.lele	fan fan	fan		ptical	disk (disk
EIDE controller		nced IDE co							`ombo\	liar	fan fan	diale	diale	_			
EIDE Combo	DVD-I	ROM/CD-R							2011100)	III o	ptical	disk	disk	Rea		<u> </u>	
SATA disk(s) SATA controller	None Serial	ATA, SATA	3.0Gl	o/s, įr	ntegrate	d in IC	19R, n	ot use	ed by disks					PS	SU _ 1 - PCI	2 - PCle x4	
SATA connector		ATA conne				า 3.5" (disk ba	ackpla	te			r front; n					
SATA RAID con		_SI™ 1Ö64E PCI Express			Gb/s, R	AID ⁸ 0	1 sup	port,		• 44	40mm W	22" D x 2 559m	m D x 4	l3mm			
SAS disk SAS connectors	None	4 hot-swap			on 2 5"	disk h	acknla	ne				7kg) max op cover			n		
SAS RAID cont	15U: I		SAS 3	3.0Gl					, 60 support	' • To	oolless a	isk and o dapter re	etention	l	emoval em error	I ED	
Chipset		3210 Chips AID 0, 1, 10								Soi	ne: 2.5"	disk bay	/s:				
Riser card Front ports		ins one PC ISB 2.0	I Expr	ess®	x4 slot a	and on	e PCI	Expre	ss x8 slot	Bay	/ ② 2.5"	, 0.6" h	igh, ex	ternal	, std opti , optiona	ıl disk	
Rear ports	Two L	ISB 2.0, ext hernet (RJ	ternal	moni	tor (VG	DB-1	5), ser	ial (9-	pin),	Bay	4 2.5"	, 0.6" h	igh, ex	ternal	optionaloptional	ıl disk	
Diagnostics	Diagn	ostic LEDs	(syste	m-ei	ror LED	on fro	nt cove	er; err	or LEDs for				•	ternal	, optiona	ıl disk	
Systems mgmt	Syste	disk control m_manager	nent u					nent c	ontroller,	Bav	/ ① 5.25	disk bay 5", 0.5" h	iah. ext	ternal	, std opt	cal	
Audio	None	2.0-complia	nt							Bay Bay	/ ② 3.5" / ③ 3.5"	, 1" hig , 1" hig	jh, ext h. ext		optionaloptional		
Speaker Ethernet		al speaker gigabit on p	lanar.	Broa	dcom® 5	5722 (F	Cle x	1).		1		s riser ca	-				
	Broad	com 5703 ((PCI 2	.2), f	ull duple	x, Wak	e on L	.ÁŃ®		Slo	t 1: 3/4-l t 2: half-	ength, f Iength, l	ull-heigl ow-prof	ht, Po ile, Po	Cle x8 Cle x4 (x8	mechan	ical)
Keyboard Mouse	None	(use USB r	oort)									3 ,	•	•	`		,
Power supply		850 watts, o non-hot-swa				redunc	ant, tv	vo var	iable speed								
Cooling		ans, five ma				eed											
Accessories 1GB PC2-640	ט חחם ט	ECC LIDIA	48.4				45J6	2100									
2GB PC2-640	DDR2	ECC UDIN	1M	D:-I	. (7000		45J6	3189									
160GB 3.5" Si 250GB 3.5" Si	mple-sv	ap SATA 3.	.0Gb/s	Disk	(7200 i	pm)	45J6 45J6	3196					0-				
500GB 3.5" Si 750GB 3.5" Si	mple-sw	ap SATA 3.	.0Gb/s	Disk	(7200 i	pm)	45J6 45J6			. P	ower-on	passwoi		curit	У		
73GB 2.5 " Ho 146GB 2.5 " H	t-swap S ot-swap	SAS 3.0Gb/ SAS 3.0Gb	s Disk o/s Dis	(150 k (10	000 rpm) 0000 rpn	n)	45J6 45J6			• A	dministra	ator pass lence co	sword				
Other accesso				`	•					• B	oot with		oard, m	ouse,	diskette		
_			Limite	d Wa	rranty ¹							disablen		ont or	all)		
3-year partsCustomer F			RU) pa	arts c	nly (wit	n limite	d ons	ite ser	vice for se-			Softw	are ma	nage	ment too	ols	

Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
 ThinkPlus™ services available; see lenovo.com/thinkplus/warranty
 Onsite service upgrade options (in eligible locations)⁷
 Post warranty maintenance services
 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378

- ThinkServer EasyStartup
- ThinkServer EasyManage

ThinkPlus Priority Support, 90-day Trial

RoHS-compliant

ThinkServer





Lenovo ThinkServer TD100



Lenovo ThinkServer TD100x



Lenovo ThinkServer TD100 or TD100x



Lenovo ThinkServer TD100 or TD100x



Lenovo ThinkServer TD100x with Easy LED Diagnostic panel



Lenovo ThinkServer TD100 or TD100x

Name	Type- model	Slot x bay	r Processor(s)	GHz C	ores	Memory	Disk Disk(s)size	Disk connection	Disk type	RAID controller	EIDE optical	Power supply(s)	Fans	Limited V warranty ¹	
								4 x Simple-swap 4 x Simple-swap			DVD DVD	670W 670W	3 3	1-year 1-year	Sep 08 Jan 09

- T = Tower, D = Dual processor support
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two maximum, 1333MHz system bus, and 12MB L	.2 cache	Tower Optical Optical
<u> </u>		Business black color; metal case 8.6"W x 29.4"D x 17.3"H optical tone
fully buffered, eight 240-pin DIMM sockets;	•	218mm W x 747mm D x 440mm H 75 lb (34kg) max configuration Toolless side cover removal
ATI® RN50 (ES1000), on planar; 32-bit/33MHz PC external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz	I 2.3, 16MB,	Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons
one connector on planar, single 2-drop IDE cable DVD-ROM, 1.6" high None	(for DVD)	Rack shelf support Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, optional tape or optical Bay ② 5.25".
None 15U SATA: Adaptec® AIC-9580W, SATA 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on plar	SAS 3.0Gb/s,	Bay ® 5.25", 1.6" high, external, optional tape or optical Bay ® 3.5", 1" high, external, optional disk external, optional disk external, optional disk Bay ® 3.5", 1" high, external, optional disk
14U SATA: RAID-8k Adapter, SATA 3.0Gb/s, SAS		Bay © 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCIe® x4 (x8 mechanical) Slot 2: full-length, full-height, PCIe x8
Intel 5000P chipset, Intel 6321ESB-2E I/O Contro NS PC8374L Super I/O	oller Hub,	Slot 3: full-length, full-height, PCIe x8 Slot 4: full-length, full-height, 64-bit PCI-X
mouse (PS/2), external monitor (VGA DB-15), ethe	(PS/2), ernet (RJ-45),	Slot 5: full-length, full-height, 64-bit PCI-X Slot 6: half-length, full-height, PCI
Diagnostic LEDs (system-error LED on front cover RAID, memory, processors, PCI slots, voltage regularity		
System management utility, baseboard management	ent controller,	Security
None		Side cover lock (ships with two identical keys)
	PCle x1,	prohibits removal of front panel and disksPower-on passwordAdministrator password
None (use PS/2 or USB port) None (use PS/2 or USB port) One 670 watts, one maximum, non-redundant, var non-hot-swap, universal	riable speed fan,	Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)
protection, hot-swap, six fans required with second		ThinkPlus Priority Support, 90-day Trial
power supply		RoHS-compliant
Software management tools		Limited Warranty ¹
asyStartup • ThinkServer EasyManage		□ 1-year parts and labor
D DDR2 ECC FB-DIMM 45J61 D DDR2 ECC FB-DIMM 45J61 D DDR2 ECC FB-DIMM 45J61 M pple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J61	91 92 93 95 96 97	Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)² Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
	two maximum, 1333MHz system bus, and 12MB L Processor uses FC-LGA6 package, two LGA771 s 2GB std, 32GB max, PC2-5300 667MHz DDR2, A fully buffered, eight 240-pin DIMM sockets; Non-italics: standard memory in two sockets; six s ATI® RN50 (ES1000), on planar; 32-bit/33MHz PC external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz Enhanced IDE/ATA 100 controller in Enterprise Scione connector on planar, single 2-drop IDE cable of DVD-ROM, 1.6" high None 5 Four simple-swap connectors on 3.5" disk backplan None 15U SATA: Adaptec® AIC-9580W, SATA 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on plan None 14U SATA: RAID-8k Adapter, SATA 3.0Gb/s, SAS RAID® 0, 1, 1e, 5, 6, 10 support, in resingle cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Control NS PC8374L Super I/O Two USB 2.0, two serial (9-pin), parallel, keyboard mouse (PS/2), external monitor (VGA DB-15), ethe system management (RJ-45) Diagnostic LEDs (system-error LED on front cover RAID, memory, processors, PCI slots, voltage regulation power supply) System management utility, baseboard management IPMI 2.0-compliant None Internal speaker Gigabit ethernet on planar, Broadcom® BCM5721, full duplex, Wake on LAN® None (use PS/2 or USB port) One 670 watts, one maximum, non-redundant, var non-hot-swap, universal Three or six fans, six maximum, variable speed, he protection, hot-swap, six fans required with second power supply Software management tools EasyStartup • ThinkServer EasyManage	Non-italics: standard memory in two sockets; six sockets available ATI® RNS0 (ES1000), on planar; 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (for DVD) DVD-ROM, 1.6" high None Brour simple-swap connectors on 3.5" disk backplane None 15U SATA: Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar None 14U SATA: RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O Two USB 2.0 Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45) Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, PCI slots, voltage regulator module, power supply) System management utility, baseboard management controller, IPMI 2.0-compliant None Internal speaker Gigabit ethernet on planar, Broadcom® BCM5721, PCIe x1, full duplex, Wake on LAN® None (use PS/2 or USB port) Software management tools EasyStartup • ThinkServer EasyManage d-Core Processor E5405 DDR2 ECC FB-DIMM 45J6191 DDR2 ECC FB-DIMM 45J6193 DDR2 ECC FB-DIMM 45J6196 DDR2 ECC FB-DIMM 45J6197 nple-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6196 Higher Savap SATA 3.0Gb/s Disk (7200 rpm) 45J6196 Higher Savap SATA 3.0Gb/s Disk (7200 rpm) 45J6198

See footnotes for important warranty information US models announced September 30, 2008 or January 20, 2009 US models withdrawn effective February 2010

Name	Type- model	Slot x bay) GHzC	ores Memoi	y Disk(s	Disk) size	Disk connection	Disk type	RAID controlle	EIDE r optical	Power supply(s)	Fans	Limited V warranty ¹	
								8 x Hot-swap 8 x Hot-swap						3-year 3-year	Sep 08 Sep 08
		HigEas	sy to use wi	nce ser th Thinl	ver with ro kServer Ea	ck solid syStart	up an	nology and part of EasyManag	e software	,		am			

One Intel® Xeon® Processor E5410 or E5430 with quad-core, two maximum, 1333MHz system bus, and 12MB L2 cache Processor uses FC-LGA6 package, two LGA771 sockets 2GB or 4GB std, 32GB max, PC2-5300 667MHz DDR2, Advanced ECC, fully buffered, eight 240-pin DIMM sockets; Non-italics: standard memory in two sockets; six sockets available ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@ 85Hz Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (for DVD) DVD-ROM, 1.6" high None Eight hot-swap connectors on 3.5" disk backplane None Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used Eight hot-swap connectors on 3.5" disk backplane RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O Two USB 2.0	Tower Business black color; metal case 8.6"W x 29.4"D x 17.3"H 218mm W x 747mm D x 440mm H 75 lb (34kg) max configuration Toolless side cover removal Toolless disk and optical disk disk disk disk disk disk disk disk
2GB or 4GB std, 32GB max, PC2-5300 667MHz DDR2, Advanced ECC, fully buffered, eight 240-pin DIMM sockets; Non-italics: standard memory in two sockets; six sockets available ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (for DVD) DVD-ROM, 1.6" high None Eight hot-swap connectors on 3.5" disk backplane None Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used Eight hot-swap connectors on 3.5" disk backplane RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O Two USB 2.0	218mm W x 747mm D x 440mm H 75 lb (34kg) max configuration Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support Bay ① 5.25", 1.6" high, external, optional tape or optical Bay ② 5.25", 1.6" high, external, optional tape or optical Bay ③ 5.25", 1.6" high, external, optional disk Bay ③ 3.5", 1" high, external, optional disk Bay ⑤ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high,
external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (for DVD) DVD-ROM, 1.6" high None Eight hot-swap connectors on 3.5" disk backplane None Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used Eight hot-swap connectors on 3.5" disk backplane RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O Two USB 2.0	optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support Bay ① 5.25", 1.6" high, external, std optical disk disk disk Bay ② 5.25", 1.6" high, external, optional tape or optical Bay ③ 5.25", 1.6" high, external, optional tape or optical Bay ③ 3.5", 1" high, external, optional disk Bay ⑤ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑦ 3.5", 1" high, external, optional disk Bay ⑨ 3.5", 1" high, external, optional disk Bay ⑩ 3.5", 1" high, external, optional disk Bay ⑩ 3.5", 1" high, external, optional disk Bay ⑪ 3.5", 1" high, external, optional disk
one connector on planar, single 2-drop IDE cable (for DVD) DVD-ROM, 1.6" high None Eight hot-swap connectors on 3.5" disk backplane None Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used Eight hot-swap connectors on 3.5" disk backplane RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O Two USB 2.0	Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, optional tape or optical Bay ③ 5.25", 1.6" high, external, optional tape or optical Bay ③ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ② 3.5", 1" high, external, optional disk Bay ③ 3.5", 1" high, external, optional disk Bay ⑨ 3.5", 1" high, external, optional disk Bay ⑨ 3.5", 1" high, external, optional disk Bay ⑩ 3.5", 1" high, external, optional disk Bay ⑪ 3.5", 1" high, external, optional disk
NS PC8374L Super I/O Two USB 2.0	Bay ® 3.5", 1" high, external, optional disk
	Class de half languagh feell had about DOL-® -4 (-0 1 "
Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45)	Slot 1: half-length, full-height, PCIe® x4 (x8 mechanical) Slot 2: full-length, full-height, PCIe x8 Slot 3: full-length, full-height, PCIe x8 Slot 4: full-length, full-height, 64-bit PCI-X
Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, PCI slots, voltage regulator module,	Slot 5: full-length, full-height, 64-bit PCI-X Slot 6: half-length, full-height, PCI
System management utility, baseboard management controller, IPMI 2.0-compliant	
None Internal speaker Gigabit ethernet on planar, Broadcom® BCM5721, PCIe x1, full duplex, Wake on LAN®	Security
None (use PS/2 or USB port) None (use PS/2 or USB port) Two 835 watts, two maximum, redundant with two, variable speed fan, hot-swap, universal, two redundant power supplies require six fans Six fans, six maximum, variable speed, hardware failure protection, hot-swap, six fans required with second redundant power supply	- Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks - Power-on password - Administrator password - Boot sequence control - Boot without keyboard, mouse, diskette - Serial port I/O control - USB port disablement (all)
Software management tools asvStartup • ThinkServer EasvManage	ThinkPlus Priority Support, 90-day Trial
, , , , , , , , , , , , , , , , , , , ,	RoHS-compliant
d-Core Processor E5410	Limited Warranty¹ 3-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)² Post warranty maintenance services 4 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
	Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45) Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, PCI slots, voltage regulator module, power supply) System management utility, baseboard management controller, IPMI 2.0-compliant None Internal speaker Gigabit ethernet on planar, Broadcom® BCM5721, PCIe x1, full duplex, Wake on LAN® None (use PS/2 or USB port) None (use PS/2 or USB port) Two 835 watts, two maximum, redundant with two, variable speed fan, hot-swap, universal, two redundant power supplies require six fans Six fans, six maximum, variable speed, hardware failure protection, hot-swap, six fans required with second redundant power supply Software management tools asyStartup • ThinkServer EasyManage -Core Processor E5410 -Core Processor E5410 -Core Processor E5410 -Core Processor E5410 -Special Special Spe

Name Type- Slot x Disk Disk Disk Disk RAID EIDE Power Limited Workhorse Avail type controller optical supply(s) Fans warranty Global date

TD100x 4206-14U 6x11 1 x X5450 3.00 4 2 x 2GB None 3.5" 8 x Hot-swap SATA/SAS4 RAID-8k DVD 2 x 835W 6 3-year No Sep 08

- T = Tower, D = Dual processor support
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- The TD100x differs from the TD100 because of the following standard features:
 Easy LED Diagnostic panel, support for up to eight 3.5" hot-swap SAS disks,
 two redundant 835 watt power supplies, six redundant fans

		Tower	\neg
		Business black color; metal case	→ IIIII
Advanced ECC, fully buffered, twelve 24	l0-pin ĎIMM sockets;	218mm W x 747mm D x 440mm H 75 lb (34kg) max configuration Toolless side cover removal disk disk	ן [[
ATI® RN50 (ES1000), on planar, 32-bit/33 external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz	3MHz PCI 2.3, 16MB,	Toolless disk and optical drive removal Toolless adapter retention Toolless adapter retention disk disk disk disk disk disk disk disk	
		Rack shelf support	
None Adaptec® AIC-9580W, SATA 3.0Gb/s, SA RAID® 0, 1, 10 support, 8-port, on planar Eight hot-swap connectors on 3.5" disk b	.S 3.0Gb/s, , not used packplane	Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, optional tape or op Bay ③ 5.25", 1.6" high, external, optional tape or op Bay ④ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk	
		Bay ® 3.5", 1" high, external, optional disk Bay ® 3.5", 1" high, external, optional disk	
Intel 5000P chipset, Intel 6321ESB-2E I NS PC8374L Super I/O	I/O Controller Hub,	Bay ® 3.5", 1" high, external, optional disk	
mouse (PS/2), external monitor (VGA DE	keyboard (PS/2), 3-15), ethernet (RJ-45),	Slot 1: half-length, full-height, PCIe® x4 (x8 mechanic Slot 2: full-length, full-height, PCIe x8 Slot 3: full-length, full-height, PCIe x8 Slot 4: full-length, full-height, 64-bit PCI-X	æl)
Easy LED Diagnostics (operator informaterror LEDs for fans, disks, RAID, memory	y, processors, voltage	Slot 5: full-length, full-height, 64-bit PCI-X Slot 6: half-length, full-height, PCI	
System management utility, baseboard n			
None		Security	
	3CM5721, PCIe x1,	Side cover lock (ships with two identical keys) prohibits removal of front panel and disks	
hot-swap, universal, two redundant powe Six fans, six maximum, variable speed, h	r supplies require six fans ardware failure protection,	Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)	
		ThinkPlus Priority Support, 90-day Trial	
asyStartup • ThinkServer EasyManage		RoHS-compliant	
		Limited Warranty ¹	
DDR2 ECC FB-DIMM DDR2 ECC FB-DIMM DDR2 ECC FB-DIMM DDR2 ECC FB-DIMM t-swap SATA 3.0Gb/s Disk (7200 rpm) t-swap SATA 3.0Gb/s Disk (7200 rpm) wap SATA 3.0Gb/s Disk (7200 rpm) t-swap SATA 3.0Gb/s Disk (7200 rpm) t-swap SAS 3.0Gb/s Disk (15000 rpm) t-swap SAS 3.0Gb/s Disk (15000 rpm)	45J6191 45J6192 45J6193 45J6201 45J6202 45J6203 45J6204 45J6211 45J6212	3-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays next business day response time) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)² Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	s,
	two maximum, 1333MHz system bus, an Processor uses FC-LGA6 package, two AGB std, 48GB max, PC2-5300 667MHz Advanced ECC, fully buffered, twelve 267 Mon-italics: standard memory in two soc ATI® RN50 (ES1000), on planar, 32-bit/3: external monitor port (VGA DB-15 rear); Maximum resolution: 800x600@85Hz Enhanced IDE/ATA 100 controller in Enterone connector on planar, single 2-drop If DVD-ROM, 1.6" high None Eight hot-swap connectors on 3.5" disk be None Adaptec® AIC-9580W, SATA 3.0Gb/s, SARAID® 0, 1, 10 support, 8-port, on planar Eight hot-swap connectors on 3.5" disk be RAID-8k Adapter, SATA 3.0Gb/s, SAS 3. RAID® 0, 1, 1e, 5, 6, 10 support, in reservingle cable to backplane Intel 5000P chipset, Intel 6321ESB-2E in NS PC8374L Super I/O Two USB 2.0 Two USB 2.0, two serial (9-pin), parallel, mouse (PS/2), external monitor (VGA DE system management (RJ-45) Easy LED Diagnostics (operator informaterror LEDs for fans, disks, RAID, memorregulator module, PCI slots, power suppl System management utility, baseboard in IPMI 2.0-compliant None Internal speaker Gigabit ethernet on planar, Broadcom® Efull duplex, Wake on LAN® None (use PS/2 or USB port) None (use PS/2 or USB port) None (use PS/2 or USB port) Two 835 watts, two maximum, redundant hot-swap, universal, two redundant powers six fans, six maximum, variable speed, hot-swap, six fans required with second in Software management tools asyStartup • ThinkServer EasyManage Jad-Core Processor X5450 DDR2 ECC FB-DIMM T-swap SATA 3.0Gb/s Disk (7200 rpm) T-swap SATA 3.0Gb/s Disk (7200 rpm) T-swap SATA 3.0Gb/s Disk (7200 rpm) T-swap SAS 3.0Gb/s Disk (7200 rpm)	Enhanced IDE/ATA 100 controller in Enterprise South Bridge, one connector on planar, single 2-drop IDE cable (DVD) DVD-ROM, 1.6" high None Eight hot-swap connectors on 3.5" disk backplane None Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used Eight hot-swap connectors on 3.5" disk backplane RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8374L Super I/O Two USB 2.0 Two USB 2.0 Two USB 2.0, two serial (9-pin), parallel, keyboard (PS/2), mouse (PS/2), external monitor (VGA DB-15), ethernet (RJ-45), system management (RJ-45) Easy LED Diagnostics (operator information panel on left side with error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, PCI slots, power supplies) System management utility, baseboard management controller, IPMI 2.0-compliant None Internal speaker Gigabit ethernet on planar, Broadcom® BCM5721, PCle x1, full duplex, Wake on LAN® None (use PS/2 or USB port) None (use PS/2 or USB port) Two 835 watts, two maximum, redundant with 2, variable speed fan, hot-swap, universal, two redundant power supplies require six fans Six fans, six maximum, variable speed, hardware failure protection, hot-swap, six fans required with second redundant power supply Software management tools asyStartup • ThinkServer EasyManage Inde-Core Processor X5450 DR2 ECC FB-DIMM 45,16191 DDR2 ECC FB-DIMM 45,16191 DDR2 ECC FB-DIMM 45,16192 DDR2 ECC FB-DIMM 45,16191 DDR2 ECC FB-DIMM 45,16191 DDR2 ECC FB-DIMM 45,16202 1-swap SATA 3.0Gb/s Disk (7200 rpm) 45,16201 1-swap SATA 3.0Gb/s Disk (7200 rpm) 45,16201 1-swap SAS 3.0Gb/s Disk (7200 rpm) 45,16211 1-swap SAS 3.0Gb/s Disk (15000 rpm) 45,16211	two maximum, 1333MHz system bus, and 12MB L2 cache Processor uses FC-LGA6 package, two LGA7T sockets 4GB std. 48GB max, PC2-5300 667MHz DDR2, Advanced ECC, fully buffered, twelve 240-pin DIMM sockets; hon-italics: standard memory in two sockets variable packages and the standard memory in two sockets variable packages and the standard memory in two sockets variable packages. Alter Packages and the standard memory in two sockets variable packages. Alter Package and the standard memory in two sockets variable packages. Alter Package and the standard memory in two sockets variable packages. Alter Packages and the standard memory in two sockets variable packages. Alter Packages and the standard memory in two sockets variables. Alter Packages and the standard memory in two sockets variables. Alter Packages and the standard packages and the standard packages. The standard memory in two sockets variables. Alter Packages and the standard packages and packages and packages and packages and packages and packages. The standard packages and packages and packages and packages and packages and packages. The standard packages and packages. The standard packages and packages. The standard packages and packages







Lenovo ThinkServer RD120



Lenovo ThinkServer RD120

Lenovo ThinkServer RD120



Lenovo ThinkServer RD120



Lenovo ThinkServer RD120

	Slot x Disk Disk Disk Disk	RAID EIDE Power Limited Workhorse Avail
	bay Processor(s)GHzCores Memory Disk(s)size connection type J 4x7 1 x E5205 1.86 2 2 x 1GB None 3.5" 6 x Hot-swap SATA/SA J 4x7 1 x E5205 1.86 2 2 x 1GB None 3.5" 6 x Hot-swap SATA/SA	
	 R = Rack, D = Dual processor support High performance server with rock solid technology and proven h Easy to use with ThinkServer EasyStartup and EasyManage softw These small and medium business (SMB) models are part of the U 	are
Processor	One Intel® Xeon® Processor E5205 with dual-core, two maximum, 1066MHz system bus, and 6MB L2 cache	2U Rack top
Implementation	Processor uses FC-LGA6 package, two LGA771 sockets	
Memory	2GB std, 48GB max, PC2-5300 667MHz DDR2 , Advanced ECC , fully buffered, 4-channel capable, twelve 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in two sockets; ten sockets available	Riser slot 1 SW Hiser slot 1 SW Hiser slot 2 Riser slot 1 SW Hiser slot 2 Riser slot 1 SW Hiser slot 2 Riser
Graphics	ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (two VGA DB-15 front and rear); Maximum resolution: 800x600@85Hz	N Z E E G G G G G G G G G G G G G G G G G
EIDE controller EIDE Combo	Enhanced IDE controller in Enterprise South Bridge, one connector on planar, single 1-drop IDE cable (for Combo) DVD-ROM/CD-RW, Ultrabay Enhanced, 12.7mm high	SOCKET OPTICAL CHARGE CONTROL CPU
SATA disk(s) SATA connectors SAS disk(s)	None Six hot-swap connectors on 3.5" disk backplane None	fan
SATA/SAŠ ⁴ cont	14U SATA/SAS: Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar	
	Six hot-swap connectors on 3.5" disk backplane 12U SATA/SAS: RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane	optical disks disks Line Disks Disk
Chipset	Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O	Black color front; metal case 17.5"W x 27.8"D x 3.36"H 17.5 W x 27.8 D x 3.36 H 17.5 W x 27.8 D x 3.36 H 17.5 W x 27.8 D x 3.36 H 17.5 W x 27.8 W x 3.36 H 17.5 W x 27.8 W x 3.36
Riser card Front ports Rear ports Diagnostics	Contains two PCI Express® x8 slots Two USB 2.0, external monitor (VGA DB-15) Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card,	443.6mm W x 705mm D x 85.4mm H 65 lb (29.5kg) max configuration Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel
Systems mgmt Audio Speaker Ethernet	PCI slots, power supplies) System management utility, baseboard management controller, IPMI 2.0-compliant None Internal speaker Dual gigabit on planar, two Broadcom® 5708, PCIe x1, full duplex, Wake on LAN®, TCP/IP Offload Engine (TOE),	Bay ① 5.25", 0.5" high, external, std optical Bay ② 3.5", 1" high, external, optional disk Bay ③ 3.5", 1" high, external, opt disk (used by tape) Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑥ 3.5", 1" high, external, optional disk Bay ⑦ 3.5", 1" high, external, optional disk
Keyboard Mouse Power supply Cooling	None (use USB port) None (use USB port) Two 835 watts, two maximum, redundant with 2, variable speed fan, hot-swap, universal, two redundant power supplies require ten fans Ten fans, ten maximum, variable speed, hardware failure protection, hot-swap, ten fans required with second redundant power supply	Slot 1: full-length, full-height, PCIe x8 (on riser card) Slot 2: half-length, full-height, PCIe x8 (on riser card) Slot 3: full-length, low-profile, PCIe x4 (x8 mechanical) Slot 4: full-length, low-profile, PCIe x4 (x8 mechanical)
Accessories		
1GB PC2-5300 2GB PC2-5300 4GB PC2-5300 500GB 3.5" Hot 750GB 3.5" Hot-sv 300GB 3.5" Hot	d-Core Processor E5205 45J6180 DDR2 ECC FB-DIMM 45J6191 DDR2 ECC FB-DIMM 45J6192 DDR2 ECC FB-DIMM 45J6193 t-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6202 t-swap SATA 3.0Gb/s Disk (7200 rpm) 45J6203 vap SATA 3.0Gb/s Disk (7200 rpm) 45J6204 t-swap SAS 3.0Gb/s Disk (15000 rpm) 45J6212 t-swap SAS 3.0Gb/s Disk (15000 rpm) 67Y0119	Security Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control
	ies at lenovo.com/accessories	USB port disablement (front or all)
	Limited Warranty ¹	
selected parts ³ , day response tir	placeable Unit (CRU) parts only (with limited onsite service for 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business	Software management tools ThinkServer EasyStartup ThinkServer EasyManage
Onsite serv	vice upgrade options (in eligible locations)7	ThinkPlus Priority Support, 90-day Trial
	nty maintenance services lay¹⁴ toll-free support during the warranty period¹ via 800-426-7378	RoHS-compliant

RD120 6447-21U 447 1 x E5430 2.66 4 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-23U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8k Combo 2 x 835W 10 3-year NRD120 6447-24U 447 2 x E5450 3.00 8 2 x 2GB None 3.5° 6 x Hot-swap SATA/SAS RAID-8h RAID	Sep 08 Se
Processor Implementation Processor Implementation Processor Implementation One or two Intel® Xeon® Processor E5410, E5430, or E5450 with quad-core, two maximum, 1333MHz bus, and 12MBL2 cache Processor uses FC-LGA6 package, two LGA771 sockets Memory ZGB or 4GB std, 48GB max, PC2-5300 667MHz DDR2, Advanced ECC, fully buffered, 4-channel capable, twelve 240-pin DIMM sockets; Non-Italias: standard memory in two sockets; en sockets available Graphics ATI® RN50 (ES1000), on planar, 32-bit/33MHz PC1 2.3, 16MB, external monitor port (two VGA DB-15 front and rear); Maximum resolution: 800x600@ 85Hz EIDE controller Enhanced IDE controller in Enterprise South Bridge, one connector on planar, single 1-drop IDE cable (for DVD) SATA disk(s) None SATA connectors SAS disk(s) None SATA connectors SAS disk(s) None SATA consectors SAS disk(s) SAS disk(s) SATA/SAS RAID Controller Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS controller Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS controller Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS controller Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk(s) SATA/SAS RAID Controller Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, not used SAS disk disks optical Roll⊅® 0, 1, 10 support, 8-port, on planar, 1 support, 1 support, 1 support, 1 support, 1 support, 1 support, 1	disk disk disk disk
Implementation Processor uses FC-LGA6 package, two LGA771 sockets	disk disk disk disk
ATI® RN50 (ES1000), on planar, 32-bit/33MHz PCI 2.3, 16MB, external monitor port (two VGA DB-15 front and rear); EIDE controller	disk disk
EIDE controller EIDE combo SATA disk(s) SATA disk(s) None SATA connectors SATA/SAS cont Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used SATA/SAS RAID SATA/SAS RAID Controller RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Chipset Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O Riser card Contains two PCI Express® x8 slots Front ports Rear Contains two PCI Express® x8 slots Front ports Rear Diagnostics EIDE combo DVD-ROM/CD-RW, Ultrabay Enhanced, 12.7mm high None SATA/SAS RAID RAID® 0, 1, 10 support, 8-port, on planar, not used SATA/SAS RAID RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Chipset Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O Riser card Contains two PCI Express® x8 slots Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card, PCI slots, power supplies) Systems mgmt Systems mgmt Systems mgmt Systems mgmt Systems mgmt Systems management utility, baseboard management controller.	d d d d d d d d d d
one connector on planar, single 1-drop IDE cable (for DVD) SATA disk(s) SATA disk(s) SATA disk(s) SATA connectors SAS cont SAS cont SAS cont SAS connectors SAS disk(s) SAS connectors SAS connectors SAS disk(s) SAS connectors SAS	
SATA/SAS cont Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 10 support, 8-port, on planar, not used SAS connectors 18U/21U/24U: six hot-swap connectors on 3.5" disk backplane SATA/SAS RAID RAID-8k Adapter, SATA 3.0Gb/s, SAS 3.0Gb/s, controller RAID® 0, 1, 1e, 5, 6, 10 support, in reserved connector, single cable to backplane Chipset Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O Riser card Front ports Four USB 2.0, external monitor (VGA DB-15) Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card, PCI slots, power supplies) Systems mgmt Adaptec® AIC-9580W, SATA 3.0Gb/s, SAS 3.0Gb/s, controller disk backplane Jiblical Jib	
Single cable to backplane Chipset Intel 5000P chipset, Intel 6321ESB-2E I/O Controller Hub, NS PC8742XVUL Super I/O Riser card Front ports Rear ports Pour USB 2.0, external monitor (VGA DB-15) Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card, PCI slots, power supplies) Systems mgmt 17.5"W x 27.8"D x 3.36"H 443.6mm W x 705mm D x 85.4mm H 64 lb (29kg) max configuration Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Some: 2.5" disk bays: Bay © 5.25", 0.5" high, external, optional tap Bay © 2.5", 1.6" high, external, optional tap Bay © 2.5", 0.6" high, external, optional disp	
Riser card Front ports Rear ports Contains two PCI Express® x8 slots Two USB 2.0, external monitor (VGA DB-15) Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45), external SAS Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED; error LEDs for fans, disks, RAID, memory, processors, voltage regulator module, riser card, PCI slots, power supplies) Systems mgmt Contains two PCI Express® x8 slots Toolless top cover removal Toolless disk and optical drive removal Toolless top cover removal Toolless top cover removal Toolless disk and optical drive removal Toolless top cover removal Toolless disk and optical drive removal	
IPMI 2.0-compliant Bay @ 2.5", 0.6" high, external, optional disl	k
Audio None Speaker Internal speaker Ethernet Dual gigabit on planar, two Broadcom® 5708, PCle x1, full duplex, Wake on LAN®, TCP/IP Offload Engine (TOE), Alert Standard Format 2.0 Alert Standard Format 2.0 Bay © 2.5", 0.6" high, external, optional disl	k k k
Keyboard None (use USB port) Mouse None (use USB port) None (use USB port) Power supply Two 835 watts, two maximum, redundant with 2, variable speed fan, hot-swap, universal, two redundant power supplies require ten fans Ten fans, ten maximum, variable speed, hardware failure protection, hot-swap, ten fans required with second redundant power supply Bay © 2.5", 0.6" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, std optical Bay © 3.5", 1" high, external, optional disk (optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: Bay © 5.25", 0.5" high, external, optional disk some: 3.5" disk bays: 3.5", 1" high, external, optional disk some: 3.5" disk bays: 3.5", 1" high, external, optional disk some: 3.5" disk bays: 3.5", 1" high, external, optional disk some: 3.5" disk bays: 3.5", 1" high, external, optional disk some: 3.5" disk bays:	k t 1.6" tape) ed by tape)
Accessories Intel Xeon Quad-Core Processor E5410 Intel Xeon Quad-Core Processor E5430 Intel Xeon Quad-Core Processor Intelling this pay © 3.5", 1" high, external, optional dis Bay © 3.5", 10 high pictures and 10 high pictures and 10	k k er card) er card) chanical)
Software management tools ThinkServer EasyStartup ThinkServer EasyManage Security	
Limited Warranty¹ 3-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty	
Onsite service upgrade options (in eligible locations) ⁷ Post warranty maintenance services 24 hour x 7 day ¹⁴ toll-free support during the warranty period¹ via 800-426-7378 RoHS-compliant	

ThinkServer™ RS110, RD120, TS100, TD100, TD100x Accessories

Partial list of accessories supported on Let RS110, RD120, TS100, TD100, TD100x ThinkServer Ready accessories are available Business Partners. Locate a Business Partne bplocator.lenovo.com	through Lenovo		
Processors ⁵⁵ TD100, RD120: Intel® Xeon® Processor E5405 Intel Xeon Processor E5410 Intel Xeon Processor E5420 Intel Xeon Processor E5430	45J6221 ann 09/30/08 45J6185 ann 09/30/08 45K1605 ann 09/30/08 45J6186 ann 09/30/08	Storage RS100, RD120: 2.5" SAS Hot-swap (HS): 73GB 2.5" SAS SFF HS (15000 rpm) 146GB ² 2.5" SAS SFF HS (10000 rpm)	45J6208 ann 09/30/08 45J6207 ann 09/30/08
TD100x: Intel Xeon Processor X5450 RD120: Intel Xeon Processor E5205 55 Additional Processor must match the existin	45K1608 ann 09/30/08 45J6180 ann 09/30/08 ng processor	All: 3.5" SATA Hot-swap (HS): 160GB 3.5" SATA HS (7200 rpm) 250GB 3.5" SATA HS (7200 rpm) 500GB 3.5" SATA HS (7200 rpm) 750GB 3.5" SATA HS (7200 rpm) 1TB 3.5" SATA HS (7200 rpm)	45J6200 ann 09/30/08 45J6201 ann 09/30/08 45J6202 ann 09/30/08 45J6203 ann 09/30/08 45J6204 ann 09/30/08
Memory TS100, RS110: 1GB PC2-6400 DDR2 ECC SDRAM 2GB PC2-6400 DDR2 ECC SDRAM TD100, RD120: 1GB PC2-5300 DDR2 ECC FBDIMM	45J6188 ann 09/30/08 45J6189 ann 09/30/08 45J6191 ann 09/30/08	3.5" SATA Simple-swap: 160GB 3.5" SATA Simple-swap (7200 rpm) 250GB 3.5" SATA Simple-swap (7200 rpm) 500GB 3.5" SATA Simple-swap (7200 rpm) 750GB 3.5" SATA Simple-swap (7200 rpm)	45J6195 ann 09/30/08 45J6196 ann 09/30/08 45J6197 ann 09/30/08 45J6198 ann 09/30/08
2GB PC2-5300 DDR2 ECC FBDIMM Backup All: IBM® RDX 160GB Cartridge IBM RDX 320GB Cartridge IBM RDX 500GB Cartridge IBM DDS Generation 6 5-Pack Media	45J6192 ann 09/30/08 67Y0169 ann 11/10/09 67Y0170 ann 11/10/09 67Y0171 ann 11/10/09 67Y1377 ann 11/10/09		
TS100, TD100, RD120: IBM LTO Generation 3 5-Pack Media	67Y1379 ann 11/10/09		
Connectivity IBM 8Gb FC Single-port HBA by QLogic® IBM 8Gb FC Dual-port HBA by QLogic IBM 8Gb FC Single-port HBA by Emulex® IBM 8Gb FC Dual-port HBA by Emulex IBM 8Gb FC Single-port HBA by Brocade® IBM 8Gb FC Dual-port HBA by Brocade®	67Y0172 ann 11/10/09 67Y0173 ann 11/10/09 67Y0174 ann 11/10/09 67Y0175 ann 11/10/09 67Y0176 ann 11/10/09 67Y0177 ann 11/10/09	For more information on server accessories www.lenovo.com/support/accessories www.lenovo.com/support/thinkserveracc	
Preferred Pro USB Keyboard	73P5220 ann 06/21/05	Other accessories at www.lenovo.com/acc	essories
Lenovo Optical Mouse (USB)	06P4069 ann 05/21/03	Accessories Guide pdf at www.lenovo.com/	accessoriesguide
IBM RDX 500GB Cartridge IBM DDS Generation 6 5-Pack Media TS100, TD100, RD120: IBM LTO Generation 3 5-Pack Media Connectivity IBM 8Gb FC Single-port HBA by QLogic® IBM 8Gb FC Dual-port HBA by QLogic IBM 8Gb FC Single-port HBA by Emulex® IBM 8Gb FC Dual-port HBA by Emulex® IBM 8Gb FC Single-port HBA by Brocade® IBM 8Gb FC Dual-port HBA by Brocade® IBM 8Gb FC Dual-port HBA by Brocade Keyboard Preferred Pro USB Keyboard Mouse	67Y0171 ann 11/10/09 67Y1377 ann 11/10/09 67Y1379 ann 11/10/09 67Y0172 ann 11/10/09 67Y0173 ann 11/10/09 67Y0174 ann 11/10/09 67Y0175 ann 11/10/09 67Y0176 ann 11/10/09 67Y0177 ann 11/10/09	www.lenovo.com/support/accessories www.lenovo.com/support/thinkserveracc www.lenovo.com/support/security Other accessories at www.lenovo.com/acc	essories

ThinkServer™ TS100, TD100, RS110, RD120 - ThinkPlus™ Services

Partial list of Lanava® ThinkPlus Carviage for ThinkSawa	₽ TM	ThinkPlus Priority Support	
Partial list of Lenovo® ThinkPlus Services for ThinkServe	#I ''''	ThinkPlus Priority Support • 9x5 Next Business Day response Lenovo Onsite Repair	
For more information see: http://www.lenovo.com/services_warranty/us/en/index.h	tml	24x7 4-hour response Lenovo Onsite Repair (for Priority 24x7 support with priority routing and advanced level technique.)	4 Support)
		TS100 with 1-year warranty	451/4057
Training classes		3-year Priority Support 3-year Priority 4 Support	45K4057 45K4058
The basics on components, diagnostics, troubleshooting, managing I apply applying delivered in interactive applies for the property of the property o		TS100 with 3-year warranty	
managing Lenovo servers, delivered in interactive online for Online Training, Understanding Lenovo Servers	45K4080	3-year Priority Support 3-year Priority 4 Support	45K4060 45K4061
Online Training, Understanding Systems Management	45K4081	TD100 with 1-year warranty	431(4001
Installation, ThinkServer Hardware Only	45K4082	3-year Priority Support	45K4064
ThinkPlus service upgrade options ⁷		3-year Priority 4 Support TD100 with 3-year warranty	45K4065
LOR = Lenovo Onsite Repair		3-year Priority Support	45K4067
TS100 with 1-year warranty 3-year LOR 9x5 Next Business Day	45K4055	3-year Priority 4 Support	45K4068
3-year LOR 9x5 4 hour response	45K4056	RS110 with 1-year warranty 3-year Priority Support	45K4071
4-year LOR 9x5 Next Business Day 4-year LOR 9x5 4 hour response	51J0723 51J0724	3-year Priority 4 Support	45K4072
5-year LOR 9x5 Next Business Day	51J0725	RS110 with 3-year warranty 3-year Priority Support	45K4074
5-year LOR 9x5 4 hour response	51J0726	3-year Priority 4 Support	45K4075
TS100 with 3-year warranty 3-year LOR 9x5 4 hour response	45K4059	RD120 with 1-year warranty	451/5007
4-year LOR 9x5 Next Business Day 4-year LOR 9x5 4 hour response	51J0727 51J0728	3-year Priority Support 3-year Priority 4 Support	45K5307 45K5308
5-year LOR 9x5 Next Business Day	51J0729	RD120 with 3-year warranty	
5-year LOR 9x5 4 hour response	51J0730	3-year Priority Support 3-year Priority 4 Support	45K4077 45K4078
TD100 with 1-year warranty 3-year LOR 9x5 Next Business Day	45K4062		_
3-year LOR 9x5 4 hour response	45K4063	ThinkPlus Priority Support with Hard Disk Drive Reter	
4-year LOR 9x5 Next Business Day 4-year LOR 9x5 4 hour response	51J0731 51J0732	 9x5 Next Business Day response Lenovo Onsite Repair 24x7 4-hour response Lenovo Onsite Repair (for Priority 	
5-year LOR 9x5 Next Business Day	51J0733 51J0734	 24x7 support with priority routing and advanced level ted 	chnicians
5-year LOR 9x5 4 hour response TD100 with 3-year warranty	3100734	Hard Disk Drive Retention (HDDR) means customer kee HDDR = Hard Disk Drive Retention	eps disk
3-year LOR 9x5 4 hour response	45K4066	TS100 with 1-year warranty	
4-year LOR 9x5 Next Business Day 4-year LOR 9x5 4 hour response	51J0735 51J0736	3-year Priority Support with HDDR	45K5441
5-year LOR 9x5 Next Business Day	51J0737 51J0738	3-year Priority 4 Support with HDDR TS100 with 3-year warranty	45K5442
5-year LOR 9x5 4 hour response RS110 with 1-year warranty	3130736	3-year Priority Support with HDDR	45K5443
3-year LOR, 9x5 Next Business Day	45K4069	3-year Priority 4 Support with HDDR	45K5444
3-year LOR, 4 hour response 4-year LOR 9x5 Next Business Day	45K4070 51J0739	TD100 with 1-year warranty 3-year Priority Support with HDDR	45K5445
4-year LOR 9x5 4 hour response	51J0740	3-year Priority 4 Support with HDDR	45K5446
5-year LOR 9x5 Next Business Day 5-year LOR 9x5 4 hour response	51J0741 51J0742	TD100 with 3-year warranty 3-year Priority Support with HDDR	45K5447
RS110 with 3-year warranty		3-year Priority 4 Support with HDDR	45K5448
3-year LOR, 4 hour response 4-year LOR 9x5 Next Business Day	45K4073 51J0743	RS110 with 1-year warranty 3-year Priority Support with HDDR	45K5449
4-year LOR 9x5 4 hour response	51J0744	3-year Priority 4 Support with HDDR	45K5450
5-year LOR 9x5 Next Business Day 5-year LOR 9x5 4 hour response	51J0745 51J0746	RS110 with 3-year warranty	451/5454
RD120 with 1-year warranty		3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR	45K5451 45K5452
3-year LOR 9x5 Next Business Day 3-year LOR 9x5 4 hour response	45K5305 45K5306	RD120 with 1-year warranty	
4-year LOR 9x5 Next Business Day	51J0747	3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR	45K5453 45K5454
4-year LOR 9x5 4 hour response 5-year LOR 9x5 Next Business Day	51J0748 51J0749	RD120 with 3-year warranty	10110101
5-year LOR 9x5 4 hour response	51J0750	3-year Priority Support with HDDR	45K5455 45K5456
RD120 with 3-year warranty 3-year LOR 9x5 4 hour response	45K4076	3-year Priority 4 Support with HDDR	45N5450
4-year LOR 9x5 Next Business Day	51J0751	ThinkPlus Productivity	
4-year LOR 9x5 4 hour response 5-year LOR 9x5 Next Business Day	51J0752 51J0753	Priority Support Online Training, Understanding Lenovo Servers	
5-year LOR 9x5 4 hour response	51J0754	One-time hardware installation	
Lenovo Online Data Backup		3-year ThinkPlus Productivity, TS100 (1-year) 3-year ThinkPlus Productivity, TS100 (3-year)	45K4084 45K4086
Secure offsite data storage		3-year ThinkPlus Productivity, TD100 (1-year)	45K4088
 256-bit Advanced Encryption System Data recovery or access in case of an unforeseen event 		3-year ThinkPlus Productivity, TD100 (3-year) 3-year ThinkPlus Productivity, RS110 (1-year)	45K4090 45K4092
Automatic, remote management		3-year ThinkPlus Productivity, RS110 (3-year)	45K4094
Choose which business critical data to back up 1-year 25GB Server Lenovo Online Data Backup (US)	45K2115	3-year ThinkPlus Productivity, RD120 (1-year) 3-year ThinkPlus Productivity, RD120 (3-year)	45K5309 45K4096
1-year 50GB Server Lenovo Online Data Backup (US)	45K2116		
1-year 100GB Server Lenovo Online Data Backup (US)	45K2117		

	Slot x bay	Processor	GHz			Memory speed	Disk(s)		Pre-cor RAID			Graphics adapter(s)	Windows Server preload	Power supply(s)	Avail date
0992-191	J 4x4	X3450	2.66	4	1x4GB	1333MHz	1x500GB	² 3.5"	No	2xDirect Cable	DVD±RW	FX380	No	280W	Nov 10

- Real server class dependability at desktop price point
 Ideal entry single-socket tower server for growing enterprises, corporate branch offices and Managed Service Providers
 This model has a 3-year limited warranty¹
 This small and medium business (SMB) model is part of the US TopSeller™ Program

Processor Implementation	Intel® Xeon® Processor X3450 with quad-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, TXT, Turbo Boost Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket, up to one processor	Tower PSU			
Memory	4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC, four 240-pin DIMM sockets	optical			
Graphics	NVIDIA® Quadro® FX 380, PCIe x16 adapter, 256MB, two dual-link DVI-I, includes DVI to VGA converter, 35W				
Disk bays SATA disk(s) SATA DVD±RW SATA controller	Two 3.5" SATA disk bays, no hot-swap, direct cable 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5" Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA connectors for disks, two SATA connectors for opticals	000 1 - PCle x16 2 - PCle x1 3 - PCl 4 - PCl			
Chipset	Intel 3450 Chipset, Platform Controller Hub (PCH) for PCI, ethernet, and USB	Raven black color; metal case 6.9"W x 16.0"D x 14.9"H			
Front ports Rear ports Ethernet Security chip Diagnostics	Two USB 2.0 Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) Intel HD model(s): one analog VGA DB-15, one DisplayPort One gigabit ethernet on planar, Intel 82578DM STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant Two system status LEDs on front panel (disk drive activity, power/sleep)	175mm W x 407mm D x 377mm H 24.7 lb (11.2kg) max configuration 25-liter Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Disk Bays			
Keyboard Mouse Power supply Cooling Rack mount	None (use USB port) None (use USB port) One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified 4 fans (power supply, CPU, rear, front) Rack shelf support	Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 3.5", 1" high, external, std disk Bay 4 3.5", 1" high, external, opt disk Expansion Slots Slot 1: half-length, full-height, PCI Express 2.0 x16			
2GB PC3-10600 4GB PC3-10600 500GB 3.5" SATA 1TB 3.5" SATA C More accessorie	Accessories 0 DDR3 ECC UDIMM 67Y1387 0 DDR3 ECC UDIMM 67Y1388 0 DDR3 ECC UDIMM 67Y1389 A Cabled (7200 rpm) 67Y1401 Cabled (7200 rpm) 67Y1402 as on O-RED sheet as at lenovo.com/accessories	Slot 2: half-length, full-height, PCI Express 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI Slot 4: half-length, full-height, 32-bit PCI Software Management Tools • ThinkServer EasyStartup Power-On Hotkey • Setup Utility: F1 at startup • Diagnostic: F2 at startup • Network Boot: F12 at startup • RAID Configuration Utility: Ctrl+I at startup Security • Security chip (see information on left) • 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)			
selected part ⇒ ThinkPlus™ s	placeable Unit (CRU) parts only (with limited onsite service for s³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) services available; see lenovo.com/thinkplus/warranty				
 Post warra 	vice upgrade options (in eligible locations) ⁷ nty maintenance services ay¹⁴ toll-free support during the warranty period¹ via 800-426-7378	ENERGY STAR® Server 1.0-compliant RoHS-compliant			

Type-	Slot x	Proc-	GH= C===	Memory	Diak/a\	Disk	Disk bays	Disk Controller	Disk type	SATA		System	Etherne	Avai
Name model TD230 1027-12U	bay J 5x71	. ,	2.13 4		Disk(s) 1 x 250GB ²	size 2 3.5" 5				optical DVD±RW	0/1/10		2xGb	
	 Flexi 	ible and g	s a 1-year l reen tower l medium b	computii	ng at value		point ort of the US To	pSeller™ I	Program					
Processor(s)	Intel® 2 4.8GT/ Intel 64 800MH	(eon® Pro s (giga-tra l, Virtualiz	ssors, one pocessor E5 ansfers/sectation Techronemory cor	506 with ond) QPI nology,	quad-core (QuickPat	e , h Interd	connect),		otical otical			SU		
Memory	2GB st RDIMN eight 24 * Syste DDR3	d, 32GB r I, PC3-10 40-pin DIN m automa memory o	max (16GB 600 1333M MM sockets atically cloc	Hz DDR: **, ks down t	3*, EĆC, N for process	•	Mirroring, h 800MHz	***	disk disk disk disk		1 - PCIe 2 - PCIe 3 - PCIe	8x e		
Graphics	one VG	A DB-15	Engines™ F on rear, 32 htion: 1600	MB;	•	ageme	nt controller,		disk		4 - PCI 5 - PCI			
SATA disk(s) Disk bays Disk controller	Five 3.5 Six SA Serial	5" SATA d TA connec	OGb/s, 720 isk bays, netors for opt 3.0Gb/s, in apport	o hot-swa icals and	disks.	,	C)	• 8.3"W > • 210mm • 57.6 lb	ss black < 20.1"D W x 510 (26.2kg)	color; metal x 18.5"H Omm D x 47 max config	0mm H uration			
Optical Diskette Ethernet	None (use USB	ner DL DVD port) ernet ports,					Toolles	s disk ar	over removal ad optical dr	ive remo		1	
Chipset	(see rig	ght) and lii Intel I/O	set, Intel I/Onks to 8257 Controller of SATA con	'4L, enter Hub 10 R	prise sout AID (ICH1	h bridge 0R) for		Bay 2 Bay 3 Bay 4 Bay 5	Bay 3 3.5", 1" high, external, std disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5". 1" high, external, optional disk					
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites	two eth One US System Onboa IPMI 2.	SB 2.0, exernet (RJ SB 2.0 con status LI rd ServerI 0-complia	nnector for EDs on fror	optional to t, Diagno ot II grap ard mana	tape drive ostic LEDs hics/mana	on real	t controller,	Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8** Slot 4: half-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCI Express x4** x4 electrical				*		
Keyboard Mouse Power supply(s) Cooling	None (One fix Five far	ns std (po	port)	two fron	t, one rear,	, first pr	onze qualified ocessor),							
Intel Xeon E550 2GB PC3-10600 ThinkServer TD2 250GB 3.5" SAT More accessorie) DDR3 230 SAT A (7200	1333 MH; A RAID 5 rpm)	z RDIMM Upgrade	ories	67 67	7Y1449 7Y1432 7Y1459 7Y1400								
Other accessori	es at le r	novo.com	/accessorie	es										
								Setup UNetworkICH10R	Boot:	F2 at sta F12 at s Ctrl+E a	artup tartup			
32GB with eight	4GB PC		x memory DDR3 RDI			33)		Thiston		tware Mana	agemen	t Tools	i	
10.0TB with five	2TB 3.5		ax internal sks (using					• ThinkSe	erver Eas	· ·	urity			
Limited Warranty¹ 1-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)¹ Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						vice for	 Serial r 	assword anel lock equence ithout ke oort I/O d	assword cout control yboard, mo	·	kette			

Name	Type- model	Slot x bay	Proc- essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Avail Ethernet date
TD230	1040-11U	5x7	1 x E5503	2.00	2	1x2GB	1333MHz	3.5"	5 x Direct Cable	ICH10R	SATA	0/1/10	IPMI	2xGb Jul 10
TD230	1040-12U	5x6	1 x E5503	2.00	2	1x2GB	1333MHz	3.5"	4 x Hot-swap	ICH10R	SATA	0/1/10	IPMI	2xGb Jul10
TD230	1040-13U	5x6	1 x E5506	2.13	4	1x4GB	1333MHz	3.5"	4 x Hot-swap	9240-8i	SATA/SAS4	0/1/5/10	IPMI	2xGb Jul10

- These models have a 3-year limited warranty
 Flexible and green tower computing at value price point

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Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5506 with quad-core, 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache Two LGA1366 sockets	Front - (Hot-swap) Rear Optical Optical Optical Optical Optical Optical					
Memory	2GB or 4GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring, eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors	1 - PCIe x8 2 - PCIe x8 3 - PCIe x8 4 - PCI 5 - PCIe x4					
Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; Maximum resolution: 1600x1200@52Hz	Tower mechanical Business black color; metal case 8.3"W x 20.1"D x 18.5"H					
Disk bays Disk controller	Some: Five 3.5" SATA disk bays, no hot-swap, direct cable (DC) Some: Four 3.5" hot-swap (HS) SATA disk bays Some: Four 3.5" HS SATA/SAS disk bays Some: Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, RAID® 0, 1, 10 support Some: ThinkServer SAS 9240-8i, PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support DC Model(s): Six SATA connectors for opticals and disks	• 3.5 W X 20.1 D X 16.5 TH • 210mm W x 510mm D x 470mm H • 57.6 lb (26.2kg) max configuration • Toolless side cover removal • Toolless optical drive removal Hot-swap model(s): Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk					
Optical Diskette Ethernet	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two Gigabit Ethernet ports, Intel 82574L and 82567	Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk					
Chipset	Intel 5500 Chipset, Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567	Direct cable model(s): Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk					
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites Keyboard Mouse	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) One USB 2.0 connector for optional tape drive System status LEDs on front, Diagnostic LEDs on rear Onboard ServerEngines Pilot II graphics/management controller,, IPMI 2.0-compliant baseboard management controller (BMC) Monitor, SATA/SAS disk, OS None (use USB port) None (use USB port)	Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8*** Slot 4: half-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCI Express x4 *** x4 electrical					
Power supply(s) Cooling	One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor						
32GB with eight	Max memory capacity 4GB PC3-10600 DDR3 RDIMMs (using 67Y1433)	Power-On Hotkey Setup Utility: F2 at startup Network Boot: F12 at startup ICH10R RAID: Ctrl+E at startup LSI 9420-8i RAID: Ctrl+H at startup					
3.5" SATA DC:	Max internal capacity 8.0TB with four 2TB 3.5" SATA disks (using 67Y2642) 10.0TB with five 2TB 3.5" SATA disks (using 67Y2642) 2.4TB with four 600GB 3.5" SAS disks (using 67Y2644)	Software Management Tools ThinkServer EasyStartup Security					
selected part ThinkPlus™ s Onsite serv Post warrar	Limited Warranty ¹ and labor placeable Unit (CRU) parts only (with limited onsite service for s³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) services available; see lenovo.com/thinkplus/warranty rice upgrade options (in eligible locations) ⁷ nty maintenance services ay ¹⁴ toll-free support during the warranty period¹ via 800-426-7378	Administrator password User password Front panel lock out Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) RoHS-compliant					
	7 77						

Name	Type- model	Slot x bay	Proc- essor(s)	GHz	Memory DIMMs	Memory speed	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Ethernet	Avail date
			1 x E5503 1 x E5503			1333MHz 1333MHz			ICH10R ICH10R	SATA SATA	0/1/10 0/1/10	IPMI IPMI	2xGb 2xGb	

- This model has a 1-year limited warranty¹
 Flexible and green tower computing at value price point

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache Two LGA1366 sockets	Front - (Hot-swap) Rear optical optical				
Memory	2GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring, eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors					
Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; Maximum resolution: 1600x1200@52Hz	4 - PCI 5 - PCle x4				
Disk bays Disk controller	Some: Five 3.5" SATA disk bays, no hot-swap, direct cable (DC) Some: Four 3.5" hot-swap (HS) SATA disk bays Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, RAID® 0, 1, 10 support DC Model(s): Six SATA connectors for opticals and disks	Tower mechanical Business black color; metal case 8.3"W x 20.1"D x 18.5"H 210mm W x 510mm D x 470mm H 57.6 lb (26.2kg) max configuration				
Optical Diskette Ethernet	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two Gigabit Ethernet ports, Intel 82574L and 82567	Toolless side cover removal Toolless optical drive removal Hot-swap model(s):				
Chipset	Intel 5500 Chipset, Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567	Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk				
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites Keyboard	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) One USB 2.0 connector for optional tape drive System status LEDs on front, Diagnostic LEDs on rear Onboard ServerEngines Pilot II graphics/management controller, IPMI 2.0-compliant baseboard management controller (BMC) Monitor, SATA/SAS disk, OS None (use USB port)	Bay 6 3.5", 1" high, external, optional disk Direct cable model(s): Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk				
Mouse Power supply(s) Cooling	None (use USB port) One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor	Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8*** Slot 4: half-length, full-height, 32-bit PCI 2.3				
2GB PC3-1060 ThinkServer TD 250GB 3.5" SA More accessori	Accessories 6 Processor Option Kit 67Y1449 0 DDR3 1333 MHz RDIMM 67Y1432 230 SATA RAID 5 Upgrade 67Y1459 IA (7200 rpm) 67Y1400 es on O-ARTsheet ies at lenovo.com/accessories	Slot 5: half-length, full-height, PCI Express x4 *** x4 electrical				
		Power-On Hotkey				
		Setup Utility: F2 at startup Network Boot: F12 at startup				
32GB with eight	Max memory capacity : 4GB PC3-10600 DDR3 RDIMMs (using 67Y1433)	ICH10R RAID: Ctrl+E at startup				
	Max internal capacity	Software Management Tools ThinkServer EasyStartup				
	8.0TB with four 2TB 3.5" SATA disks (using 67Y2642) 10.0TB with five 2TB 3.5" SATA disks (using 67Y2642)	Security				
 selected part ThinkPlus™ s Onsite serv Post warra 	placeable Unit (CRU) parts only (with limited onsite service for s ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays) services available; see lenovo.com/thinkplus/warranty vice upgrade options (in eligible locations) ⁷ nty maintenance services	Administrator password User password Front panel lock out Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)				
→ 24 nour x / d	ay ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378	RoHS-compliant				

ThinkServer.



Lenovo ThinkServer TS200



Lenovo ThinkServer TS200 with Redundant Power Supply



Lenovo ThinkServer TS200 with Redundant Power Supply



Lenovo ThinkServer TS200

	Proc- essor(s)		Max GHz	Cores		Memory type	Memory speed		RAID battery	Disk bays	Disk type	RAID IMM Int Premiun	Power supply(s	
6525-11U 5x7 6525-12U 5x7 6525-16U 5x7	X3450	2.66	2.80 3.20 3.20	4 4 4		RDIMM	1333MHz 1333MHz 1333MHz	3.5"	None	4xSimple-swap 4xHot-swap 4xHot-swap	SATA SATA/SAS ⁴ SATA/SAS		401W	Nov 09 Nov 09 Jan 10
						ted warra ss (SMB)		e pari	of the l	JS TopSeller™ l	Program			
Processor(s)	Intel X 2.5GT/ Turbo I	(eon ® F /s (giga Boost 1	Proces a-trans Techno	ssor X3 fers/se blogy, F	3430 and cond) Di lyper-Th	MI (Direct reading T	rd, vith quad-c : Media Inte echnology r, 8MB cacl	erface (X345			Rear			
Implementation Memory	One LGA1156 socket 2GB or 4GB std, UDIMM or RDIMM*, PC3-10600 1333MHz DDR3, Advanced ECC**, Memory Mirroring 11U: Four 240-pin DIMM sockets, 16GB max (Pending availability of 4GB UDIMM), std memory in 1 socket, 3 sockets available 12U/16U: Six 240-pin DIMM sockets, supports up to 6 single- or dual-rank RDIMMs, or up to 4 quad-rank RDIMMs * Cannot intermix RDIMM and UDIMM memory ** Advanced ECC-enable DIMMs required									diskette disk disk disk disk disk disk	nanical	1 - PCle x8 2 - PCle x8 3 - PCle x4 4 - PCl 5 - PCl		
Graphics	Matrox (IMM),	® G200 one V	0eV, ir GA DE	ntegrate 3-15 in	ed in Inte	grated Ma BMB, sha	anagemen red with IM	t Mod M;	ule	Business bl 8.6"W x 21. 218mm W x	.3"D x 17.3"H x 540mm D x	I 440mm H		
Disk bays Disk Controller	11U: 12U/16 11U/12 16U:	6U: fou 2U: Se SA Se	rveRA S 3GI rveRA	hot-sw ID®-BF o/s, RA ID M10	ap (HS) R10il, PC ID ⁸ 0, 1 s D15, PCI	SÁTA/SA I Express support Express	disk bays S disk bays ® bus, SAT bus, SATA	A 3GŁ		• 56 lb (25.2kg) max configuration • Toolless side cover removal				
Optical Diskette Ethernet	None (Two gig	SAS 6Gb/s, RAID 0, 1, 10 support Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management								Day 1 5.05		isk Bays	-4:1	
Chipset		420 Cl	nipset				(PCH) for	PCI,		 Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optica Bay 3 3.5", 1" high, external, optional disket Bay 4 3.5", 1" high, external, optional disk 				
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites	one eth One Us Diagno	ISB 2.0 hernet/ SB 2.0 ostic LE d Platfo IM 6U: IM), extended for tall for tall for tall for tall for tall for tall for the form M Stall for the form th	m mana pe drive error LE odule (ndard, mium	agement e or emb Ds for fa TPM) 1.2 upgradea	(RJ-45), edded hy ns and m support		n) compl	, ,,	Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk external, optional disk Bay 7 3.5", 1" high, external, optional disk Expansion Slots Slot 1: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8 Slot 3: full, PCI Express x4 (x1 electrical) Slot 4: full, 32-bit PCI				
Keyboard Mouse Power supply(s) Cooling	no hot- Three	use US 01 watt -swap, fans st	SB po ts star no red d (pov	rt) Idard, c dundan ver sup	cy ply, syste		versal, aut drive cage		ch,	Slot 5: full, 32-bit PCI Power-On Hotkey Setup Utility: F1 at startup Diagnostic: F2 at startup Network Boot: F12 at startup RAID Configuration Utility: Ctrl+C at startup				
Virtualization re	ady, hyp	erviso		/irtuali ector e		d				• Side cover		Security	l kevs)	
Dual-rank RDIN	Max memory capacity (RDIMM models) rank RDIMM: 6GB with six 1GB PC3-10600 DDR3 RDIMMs (using 67Y0014									(4) • Administrator password				
12U/16U: 3.5"	SATA HS	S: 4.0T	SS S B with	ATA dis	TB ĤS SÌ	67Y138 ATA disks				USB port d ThinkServe	Software M r EasyStartu	anagement To	ols	
			Lir	nited V	Varranty	1					,	t, 90-day Trial		
 Customer Reselected par ThinkPlus™ Onsite ser Post warra 	 ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 									1TB 3.5" SAT 600GB 3.5" 6	Acc Gb/s SAS Di A Disk SS Gb/s SAS Di	essories sk HS (15000 r sk HS vo.com/access	67 67	7Y1385 7Y1380 7Y1386

Type- Slot x Proc- Base model bay essor(s) GHz			Memory speed	Disk RAID size battery		Disk type	RAID Int		Power n supply(s)	Avail date
6530-13U 5x7 X3450 2.66 * Multi = BAID-0/1/5/6/10 support	4 1x4GB	RDIMM	1333MHz	3.5" None	4xHot-swap	SATA/SAS ⁴	Multi*	IMM	2x430W	Nov 09

- This model has a 3-year limited warranty¹
 This small and medium business (SMB) model is part of the US TopSeller™ Program

Processor(s)	Up to one processor, one processor standard, Intel® Xeon® Processor X3450 with quad-core, 2.5GT/s DMI, Turbo Boost Technology, Hyper-Threading Technology and Intel 64, 1333MHz DDR3 memory controller, 8MB cache One LGA1156 socket	Front Rear Optical Op				
Memory	4GB std, RDIMM, PC3-10600 1333MHz DDR3, Advanced ECC**, Memory Mirroring Six 240-pin DIMM sockets, supports up to 6 single- or dual-rank RDIMMs, or up to 4 quad-rank RDIMMs ** Advanced ECC-enable DIMMs required	diskette				
Graphics	Matrox® G200eV, integrated in Integrated Management Module (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; Maximum resolution: 1024x768@85Hz	5 - PCI				
Disk bays Disk Controller Optical Diskette Ethernet	Four 3.5" hot-swap (HS) SATA/SAS disk bays ServeRAID-MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1, 5, 6, 10 support Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two gigabit ethernet ports***, Intel 82574L *** One port shared with system management	Tower mechanical, rack-mountable to 5U rack Business black color; metal case 8.6"W x 21.3"D x 17.3"H 218mm W x 540mm D x 440mm H 56 lb (25.2kg) max configuration Toolless side cover removal Rack shelf support				
Chipset	Intel 3420 Chipset, Platform Controller Hub (PCH) for PCI, ethernet and USB					
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) One USB 2.0 for tape drive or embedded hypervisor Diagnostic LEDs (error LEDs for fans and memory) IMM Premium, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant Monitor, SATA/SAS disk, OS					
Keyboard Mouse Power supply(s) Cooling	None (use USB port) None (use USB port) Two 430 watts standard, two maximum, rear access, hot-swap, redundant with two power supplies Four fans std (two power supply fans, system fan, hard drive cage), four maximum, no hot-swap, no redundancy	Disk Bays Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional diskette Bay 4 3.5", 1" high, external, optional disk				
Dual-rank RDIN	Max memory capacity IMM: 6GB with six 1GB PC3-10600 DDR3 RDIMMs (using 67Y0014) MM: 12GB with six 2GB PC3-10600 DDR3 RDIMMs (using 67Y0124) MM: 16GB with four 4GB PC3-8500 DDR3 RDIMMs (using 67Y0125) 32GB with four 8GB RDIMMs (Pending availability)	Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Expansion Slots Slot 1: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8				
	Max internal capacity 4.0TB with four 1TB HS SATA disks (using 45J6204) 2.4TB with four 600GB HS SAS disks (using 67Y1386)	Slot 3: full, PCI Express x4 (x1 electrical) Slot 4: full, 32-bit PCI Slot 5: full, 32-bit PCI				
Virtualization re	Virtualization ady, hypervisor connector embedded	Software Management Tools ThinkServer EasyStartup				
146GB ² 3.5" SA 450GB 3.5" 6GI 1TB 3.5" SATA		Power-On Hotkey Setup Utility: F1 at startup Diagnostic: F2 at startup Network Boot: F12 at startup RAID Configuration Utility: Ctrl+C at startup				
	b/s SAS Disk HS 67Y1386 les at lenovo.com /accessories	Security • Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks • Power-on password				
selected part	Limited Warranty¹ and labor placeable Unit (CRU) parts only (with limited onsite service for s³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) services available; see lenovo.com/thinkplus/warranty	Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)				
Onsite serv Post warra	vice upgrade options (in eligible locations) ⁷ nty maintenance services	ThinkPlus Priority Support, 90-day Trial				
→ 24 nour x / d	ay ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378	RoHS-compliant				

Type- model	Slot x bay	Processor	GHz		Memory DIMMs	Memory type	Memory speed	Disk size	RAID battery	Disk bays	Disk type	RAID Int	IMM Premium	Power supply(s)	Avail date
6524-11L	5x7	Pentium G6950	2.80	2	1x1GB	UDIMM	1333MHz	3.5"	None	4xSimple-swap	SATA	0/1	None	401W	Jan 10
		This model I This small as						rt of t	he IIS Ti	onSeller™ Progra	ım				

Rear Processor(s) Up to one processor, one processor standard. Front Intel® Pentium® Processor G6950 with dual-core. 0@00 Intel 64, 1066MHz DDR3 memory controller, 3MB cache PSU Implementation One LGA1156 socket optical 8 1GB std, UDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC**, Memory optical **Memory Mirroring** Four 240-pin DIMM sockets, diskette nn a 16GB max (Pending availability of 4GB UDIMM), 00 🗆 disk std memory in 1 socket, 3 sockets available 1 - PCle x8 System automatically clocks down for processor with 1066MHz disk 2 - PCle x8 DDR3 memory controller ** Advanced ECC-enable DIMMs required disk 3 - PCle x4 disk 4 - PCI Graphics Matrox® G200eV, integrated in Integrated Management Module 5 - PCI (IMM), one VGA DB-15 in rear; 128MB, shared with IMM; Maximum resolution: 1024x768@85Hz Four 3.5" simple-swap (SS) SATA disk bays ServeRAID®-BR10il, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, Disk bays Tower mechanical Disk Controller Business black color; metal case8.6"W x 21.3"D x 17.3"H RAID® 0, 1 support DVD-ROM DL SATA 1.5Gb/s 16-48X Max Drive Optical • 218mm W x 540mm D x 440mm H None (use USB port) • 56 lb (25.2kg) max configuration Diskette Two gigabit ethernet ports***, Intel 82574L Ethernet Toolless side cover removal One port shared with system management Chipset Intel 3420 Chipset, Platform Controller Hub (PCH) for PCI, ethernet and USB Extender card None Front ports Two USB 2.0 Rear ports Four USB 2.0, external monitor (VGA DB-15), one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) Internal ports One USB 2.0 for tape drive or embedded hypervisor Diagnostics Diagnostic LEDs (error LEDs for fans and memory) Systems mgmt IMM standard, Trusted Platform Module (TPM) 1.2 support, IPMI 2.0-compliant Monitor, SATA disk, OS Prerequisites None (use USB port) None (use USB port) Keyboard Mouse Power supply(s) One 401 watts standard, one maximum, universal, auto switch, no hot-swap, no redundancy **Disk Bays** Cooling Three fans std (power supply, system, hard drive cage), 5.25",1.6" high, external, std optical 5.25",1.6" high, external, optional op 3.5", 1" high, external, optional dis three maximum, no hot-swap, no redundancy Bay 1 optional optical Bay 2 Accessories optional diskette Bay з 1GB PC3-10600 DDR3 1333MHz UDIMM 160GB² 3.5" SATA Simple-swap 250GB 3.5" SATA Simple-swap 500GB 3.5" SATA Simple-swap 750GB 3.5" SATA Simple-swap 67Y0122 Bay 4 optional disk 45J6195 Bay 5 optional disk 45J6196 Bay 6 external, optional disk 45J6197 Bay 7 external, optional disk 45J6198 1TB 3.5" SATA Simple-swap **Expansion Slots** 67Y1380 Other accessories at lenovo.com/accessories Slot 1: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8 Slot 3: full, PCI Express x4 (x1 electrical) Slot 4: full, 32-bit PCI Slot 5: full, 32-bit PCI Power-On Hotkey Setup Utility: F1 at startup **Software Management Tools** Diagnostic: F2 at startup Network Boot: F12 at startup ThinkServer EasyStartup RAID Configuration Utility: Ctrl+C at startup Virtualization Virtualization ready, hypervisor connector embedded Security Side cover lock (ships with two identical keys) prohibits removal of front panel and disks Max internal capacity 4.0TB with four 1TB SS SATA disks (using 67Y1380) ower-on password · Administrator password Limited Warranty¹ Boot sequence control 1-year parts and labor Boot without keyboard, mouse, diskette Customer Replaceable Unit (CRU) parts only (with limited onsite service for Serial port I/O control selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) USB port disablement (all) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations) ThinkPlus Priority Support, 90-day Trial Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 RoHS-compliant





Lenovo ThinkServer RS210 (Four 2.5" Disk Bays)



Lenovo ThinkServer RS210 (Two 3.5" Disk Bays)



Lenovo ThinkServer RS210



Lenovo ThinkServer RS210



Lenovo ThinkServer RS210 (Two 3.5" Disk Bays)

	Proc- B	Base Max GHz GHz	Cores	Memory DIMMs	Memory type	Memory speed		RAID battery	Disk bays	Disk type	RAID		Power m supply(s)	Avail) date
6534-11U 2x3 3 6534-14U 2x5 3 6534-16U 2x3 i 6534-17U 2x3 3 * Multi = RAID-0/	X3430 2 X3450 2 i3-530 2 X3450 2	.40 2.80 .66 3.20 .93 .66 3.20	4	1x2GB 1x4GB 1x1GB	UDIMM RDIMM UDIMM	1333MHz 1333MHz 1333MHz	3.5" 2.5" 3.5"	None None None	2xHot-swap 4xHot-swap 2xSimple-swa 2xHot-swap	SATA/SAS SATA/SAS	4 0/1 Multi* 0/1	IMM	1x351W 1x351W 1x351W 1x351W	Nov 09 Nov 09 Jan 10
Processor(s)	Up to one processor, one processor standard, Intel® Core™ i3 Processor i3-530 with dual-core, Hyper-Threading Technology and 64, 1333MHz DDR3 memory controller, 4MB cache or Intel Xeon® Processor X3430 and X3450 with quad-core, 2.5GT/s (giga-transfers/second) DMI (Direct Media Interface), Turbo Boost Technology, Hyper-Threading Technology (X3450 only, Intel 64, 1333MHz DDR3 memory controller, 8MB cache One LGA1156 socket 1GB, 2GB, or 4GB std, UDIMM or RDIMM*, PC3-10600 1333MHz DDR3, Advanced ECC**,								disk disk					
Memory	PC3-106 Memory 11U/16U 14U/17U * Canno	500 1333M	Hz DDI ex (Pen ory in 1 oin DIM up to 6 quad- RDIMM	MM sock ding ava socket, M socke single- rank RD and UDI	ets, ilability of 3 sockets s, or dual-ra IMMs WM mem	C**, f 4GB UDII s available ank RDIMN	,.		CPU fan fan optical	Memory sockets fan fan fan disks		ar U 🗆 🖽	1 - PCle x8 2	2 - PCle x8
Graphics	(IMM), o	G200eV, ir one VGA DE m resolutio	3-15 in	rear; 128	MB, shai			ıle		Mechanic	al Sper	cification	ne	
Disk bays Disk Controller	Maximum resolution: 1024x768@85Hz 11U/17U: two 3.5" hot-swap (HS) SATA/SAS disk bays 16U: two 3.5" simple-swap (SS) SATA disk bays 14U: four HS SATA/SAS disk bays on 2.5" Slim-Form-Factor (SFF) 11U/16U: ServeRAID®-BR10il, PCI Express®bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support 14U: ServeRAID-MR10i, PCI Express bus, SATA 3Gb/s, SAS 3Gb/s, RAID 0, 1, 5, 6, 10 support 17U: ServeRAID M1015, PCI Express bus, SATA 6Gb/s,							1U Mechanical; rack-mount only Black color front; metal case 17.3"W x 22"D x 1.75"H 440mm W x 560mm D x 43mm H 28 lb (12.7kg) max configuration Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention						
Optical Diskette Ethernet	UltraSlin None (u: Two giga *** One	SAS 6Gh 5 is suppo n Enhanced se USB pol abit etherned port shared	orted by d DVD± rt) et ports d with s	y add-in :RW ***, Intel ystem m	Advance 82574L anageme	d Feature I			Disk Bays 11U/16U/17U: Bay 1 5.25",0.5" high, external, std optical Bay 2 3.5", 1" high, external, optional disk Bay 3 3.5", 1" high, external, optional disk 14U:					
Front ports Rear ports	Two USI Four US	B 2.0, exte	rnal mo	onitor (VC	GA DB-15	i),one ethe	rnet (F	RJ-45),	Bay 1 5.2 Bay 2 2.5 Bay 3 2.5 Bay 4 2.5	5",0.5" high, ", 0.6" high, ", 0.6" high, ", 0.6" high,	externa externa externa	al, optio al, optio al, optio	nal disk nal disk nal disk	
Internal ports Diagnostics Systems mgmt	One US Diagnos Trusted 11U/16U 14U/17U	ernet/syster B 2.0 for er tic LEDs (e Platform M J: IMM Sta J: IMM Pre SATA/SAS	nbedde rror LE odule (ndard, i mium	ed hyperv Ds for fa TPM) 1.2 upgradea	risor ns and m support,	emory) IPMI 2.0-	compli	ant	Bay 5 2.5", 0.6" high, external, optional disk Expansion Slots Slot 1: low-profile, PCI Express x8 Slot 2: half-length, full-height, PCI Express x8 Power-On Hotkey					
Keyboard Mouse Power supply(s)	None (u: None (u: 11U/16U	se USB por se USB por J/17U: Or no Or au	rt) rt) ne 351 redund ne 351 ito swite	watts, ur dancy watts, hi	gh efficie t-swap, n	ncy, univer o redunda	sal, ncy	·	Diagnostic Network Be RAID Conf Side cove	Setup Utility: F1 at startup Diagnostic: F2 at startup Network Boot: F12 at startup RAID Configuration Utility: Ctrl+C at startup Security Side cover lock (ships with two identical ke				
Cooling Six fans std (five system, one power supply), six maximum, variable speed, no hot-swap, no redundancy Max memory capacity (RDIMM models) Single-rank RDIMM: 6GB with six 1GB PC3-10600 DDR3 RDIMMs (using 67Y0014) Dual-rank RDIMM: 12GB with six 2GB PC3-10600 DDR3 RDIMMs (using 67Y0124) Quad-rank RDIMM: 16GB with four 4GB PC3-8500 DDR3 RDIMMs (using 67Y0125) 32GB with four 8GB RDIMMs (Pending availability)														
Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)² • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378								Software Management Tools ThinkServer EasyStartup ThinkServer EasyManage ThinkPlus Priority Support, 90-day Trial RoHS-compliant						

Type- Slot x		Base	Memory	Memory	Memory	Disk	RAID	Disk	Disk	RAI	D IMM	Power	Avail
model bay 6533-12U 2x3 I	Processor Pentium G6950	2.80 2		type	speed 1333MHz		None	bays 2xSimple-swa	type p SATA	Int 0/1		1x351W	
0000 120 230 1	This model This small a	has a 1-ye	ar limited	warranty ¹						0/1	None	120011	our re
Processor(s)	Up to one prod Intel® Pentiun Intel 64, 1066l One LGA1156	n® Proces MHz DDR3	sor G6950	0 with dua	al-core,	ne		1U Rack top	disk	disk			
Memory	1GB std, UDIN Advanced EC Four 240-pin I 16GB max (Pe std memory in * System auto DDR3 memorr ** Advanced E	MM, PC3-1 CC**, Memorial Section of the Memorial Secti	ory Mirronets, ilability of 3 sockets locks dow	r ing 4GB UDI available n for prod	MM),	MHz	Power supply Rear PSU D D D D D D D D D D D D D D D D D D D						
Graphics	Matrox® G200 (IMM), one VG Maximum reso	iA DB-15 i	n rear; 128	₿MB, sha		ule	СРИ	Memory sockets					
Disk bays Disk Controller	Two 3.5" simple ServeRAID®-ERAID® 0, 1 supplemental to the service of the service	BR10il, PCI port	Express®	lisk bays bus, SAT	A 3Gb/s, S	∂b/s,	fan fan	fan fan f	an				
Optical Diskette Ethernet	UltraSlim Enha None (use US Two gigabit eth *** One port sl	B port) hernet port	s***, Intel		ent		optical	disks					
Chipset	Intel 3420 Chi ethernet and U		form Cont	roller Hub	(PCH) for	PCI,		Mechanical Specifications • 1U Mechanical; rack-mount only					
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15),one ethernet (RJ-45), one ethernet/system management (RJ-45), serial (9-pin) One USB 2.0 for embedded hypervisor Diagnostic LEDs (error LEDs for fans and memory)								Black color front; metal case 17.3"W x 22"D x 1.75"H 440mm W x 560mm D x 43mm H 28 lb (12.7kg) max configuration Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention				
Keyboard Mouse Power supply(s) Cooling	None (use US None (use US One 351 watts Six fans std (fi speed, no hot-	B port) s, universal ve system	one power	er supply									
1GB PC3-10600 160GB ² 3.5" SAT 250GB 3.5" SAT 500GB 3.5" SAT 750GB 3.5" SAT 1TB 3.5" SATA S	TTA Simple-swap TA Simple-swap TA Simple-swap TA Simple-swap TA Simple-swap Simple-swap	Hz UDIMM		67Y0 ⁻ 45J61 45J61 45J61 45J61 67Y13	95 96 97 98					Disk E	Bays		
Other accessori	ies at lenovo.c o	om/access	ories					Bay 1 5.25",0.5" high, external, std optical Bay 2 3.5", 1" high, external, optional disk Bay 3 3.5", 1" high, external, optional disk					
								Slot 1: low-p Slot 2: half-l	rofile, PCI	Expres		ess x8	
								Setup Utilit Diagnostic: Network Bo	y: F1 at sta F2 at start	rtup up	Hotkey		
Software Management Tools									iguration U	tility: Ċt		artup	
ThinkServer EasyStartup ThinkServer EasyManage Max internal capacity 2.0TB with two 1TB SS SATA disks (using 67Y1380) Limited Warranty¹ 1-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for								Security Side cover lock (ships with two identical keys) prohibits removal of front panel and disks Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control					
 ThinkPlus™ s Onsite serv 	s ³ , 8 am - 5 pm, services availab vice upgrade op nty maintenanc	le; see len tions (in e	ovo.com/t	hinkplus/	warranty			USB port ThinkPlus P			-day Trial		
≈ 24 hour x 7 da			g the war	ranty per	iod¹ via 800)-426-	7378	RoHS-comp	liant				

ThinkServer™ TS200, RS210 Accessories

2GB PC3-10600 DDR3 1333MHz UDIMM 67Y0123 ann 1 1GB PC3-10600 DDR3 RDIMM (1R x 8) 67Y0124 ann 0 2GB PC3-10600 DDR3 RDIMM (2R x 8) 67Y0124 ann 0 67Y0125 ann 1			
15200, H5210.			
Business Partners. Locate a Business Partne			
1GB PC3-10600 DDR3 1333MHz UDIMM 2GB PC3-10600 DDR3 1333MHz UDIMM 1GB PC3-10600 DDR3 RDIMM (1R x 8) 2GB PC3-10600 DDR3 RDIMM (2R x 8) 4GB PC3-8500 DDR3 RDIMM (4R x 8)	67Y0122 ann 11/24/09 67Y0123 ann 11/24/09 67Y0014 ann 05/05/09 67Y0124 ann 11/24/09 67Y0125 ann 11/24/09 ort	Disk Drive 2.5" SAS Hot-swap (HS): 73GB ² 2.5" SAS SFF HS (15000 rpm) 146GB 2.5" SAS SFF HS (10000 rpm) 146GB 2.5" SAS SFF HS (15000 rpm) 300GB 2.5" SAS SFF HS (10000 rpm)	67Y0115 ann 05/05/09 67Y0116 ann 05/05/09 67Y0117 ann 05/05/09 67Y0118 ann 05/05/09
Backup IBM® RDX 160GB Cartridge IBM RDX 320GB Cartridge IBM RDX 500GB Cartridge IBM DDS Generation 6 5-Pack Media	67Y0169 ann 11/10/09 67Y0170 ann 11/10/09 67Y0171 ann 11/10/09 67Y1377 ann 11/10/09 67Y1379 ann 11/10/09	2.5" SATA Hot-swap (HS): 300GB 2.5" SATA SFF HS (10000 rpm) 160GB 2.5" SATA SFF HS (7200 rpm) 500GB 2.5" SATA SFF HS (7200 rpm) 3.5" SAS Hot-swap (HS): 146GB 3.5" SAS HS (15000 rpm)	67Y0002 ann 05/05/09 67Y0120 ann 09/08/09 67Y0121 ann 09/08/09 45J6211 ann 09/30/08
IBM 8Gb FC Single-port HBA by QLogic® IBM 8Gb FC Dual-port HBA by QLogic IBM 8Gb FC Single-port HBA by Emulex® IBM 8Gb FC Dual-port HBA by Emulex IBM 8Gb FC Single-port HBA by Brocade®	67Y0172 ann 11/10/09 67Y0173 ann 11/10/09 67Y0174 ann 11/10/09 67Y0175 ann 11/10/09 67Y0176 ann 11/10/09 67Y0177 ann 11/10/09	3.5" 6Gb/s SAS HS: 300GB 3.5" SAS HS (15000 rpm) 450GB 3.5" SAS HS (15000 rpm) 600GB 3.5" SAS HS (15000 rpm) 3.5" SATA Hot-swap (HS): 160GB 3.5" SATA HS (7200 rpm)	67Y1384 ann 01/26/10 67Y1385 ann 01/26/10 67Y1386 ann 01/26/10 45J6200 ann 09/30/08
ThinkServer IBM RAID controller SAS 3Gb HBA Controller V2 ServeRAID® M015	67Y0183 ann 11/10/09 67Y1368 ann 12/08/09	250GB 3.5" SATA HS (7200 rpm) 500GB 3.5" SATA HS (7200 rpm) 750GB 3.5" SATA HS (7200 rpm) 1TB 3.5" SATA HS (7200 rpm)	45J6201 ann 09/30/08 45J6202 ann 09/30/08 45J6203 ann 09/30/08 45J6204 ann 09/30/08

ServeRAID M5015	67Y0184	ann	11/10/09	
ServeRAID M5014	67Y0185	ann	11/10/09	
ServeRAID M1000 Series Adv Feature Key	67Y1369	ann	12/08/09	
ServeRAID M5000 Series Battery Kit	67Y0186	ann	11/10/09	
ServeRAID M5000 Series Adv Feature Key	67Y0188	ann	12/08/09	
•				

KeyboardPreferred Pro USB Keyboard
73P5220 ann 06/21/05

Mouse

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03

For more information on server accessories, please visit: www.lenovo.com/support/accessories www.lenovo.com/support/thinkserveraccessories www.lenovo.com/support/security

 3.5" SATA Simple-swap:

 160GB 3.5" SATA Simple-swap (7200 rpm)
 45J6195 ann 09/30/08

 250GB 3.5" SATA Simple-swap (7200 rpm)
 45J6196 ann 09/30/08

 500GB 3.5" SATA Simple-swap (7200 rpm)
 45J6197 ann 09/30/08

 750GB 3.5" SATA Simple-swap (7200 rpm)
 45J6198 ann 09/30/08

 67Y1380 ann 11/24/09

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkServer™ TS200, RS210 - ThinkPlus™ Services

Partial list of Lenovo® ThinkPlus Services for ThinkServer

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

Training classes

• The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

Online Training, Understanding Lenovo Servers	45K4080
Online Training, Understanding Systems Management	45K4081
Installation, ThinkServer Hardware Only	45K4082

ThinkPlus service upgrade options7

LOR = Lenovo Onsite Repair

5-year LOR 9x5 4 hour response

TS200 with 1-year warranty	
3-year LOR 9x5 Next Business Day	45K4055
3-year LOR 9x5 4 hour response	45K4056
4-year LOR 9x5 Next Business Day	51J0723
4-year LOR 9x5 4 hour response	51J0724
5-year LOR 9x5 Next Business Day	51J0725
5-year LOR 9x5 4 hour response	51J0726

TS200 with 3-year warranty 3-year LOR 9x5 4 hour response 4-year LOR 9x5 Next Business Day 45K4059 51J0727 51J0728 4-year LOR 9x5 4 hour response 5-year LOR 9x5 Next Business Day 51J0729

RS210 with 1-year warranty 3-year LOR, 9x5 Next Business Day 3-year LOR, 4 hour response 45K4069 45K4070 4-year LOR 9x5 Next Business Day 51J0739 4-year LOR 9x5 4 hour response 51J0740 5-year LOR 9x5 Next Business Day 51J0741 5-year LOR 9x5 4 hour response 51J0742

RS210 with 3-year warranty	
3-year LOR, 4 hour response	45K4073
4-year LOR 9x5 Next Business Day	51J0743
4-year LOR 9x5 4 hour response	51J0744
5-year LOR 9x5 Next Business Day	51J0745
5-year LOR 9x5 4 hour response	51J0746

Lenovo Online Data Backup

- Secure offsite data storage
- 256-bit Advanced Encryption System
- Data recovery or access in case of an unforeseen event
- · Automatic, remote management
- Choose which business critical data to back up

1-year 25GB Server Lenovo Online Data Backup (US)	45K2115
1-year 50GB Server Lenovo Online Data Backup (US)	45K2116
1-year 100GB Server Lenovo Online Data Backup (US)	45K2117

ThinkPlus Priority Support

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians

TS200 with 1-year warranty 3-year Priority Support 3-year Priority 4 Support 45K4057 45K4058

TS200 with 3-year warranty 3-year Priority Support 3-year Priority 4 Support 45K4060 45K4061

RS210 with 1-year warranty 3-year Priority Support 3-year Priority 4 Support 45K4071 45K4072

RS210 with 3-year warranty 3-year Priority Support 3-year Priority 4 Support 45K4074 45K4075

ThinkPlus Priority Support with Hard Disk Drive Retention

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
 24x7 support with priority routing and advanced level technicians
 Hard Disk Drive Retention (HDDR) means customer keeps disk
- HDDR = Hard Disk Drive Retention

TS200 with 1-year warranty	
3-year Priority Support with HDDR	45K5441
3-year Priority 4 Support with HDDR	45K5442
TS200 with 3-year warranty	

3-year Priority Support with HDDR 45K5443 3-year Priority 4 Support with HDDR 45K5444

RS210 with 1-year warranty 3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR 45K5449 45K5450

RS210 with 3-year warranty 3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR 45K5451 45K5452

ThinkPlus Productivity

Priority Support

51J0730

- Online Training, Understanding Lenovo Servers
- One-time hardware installation

3-year ThinkPlus Productivity, TS200 (1-year)	45K4084
3-year ThinkPlus Productivity, TS200 (3-year)	45K4086
3-year ThinkPlus Productivity, RS210 (1-year)	45K4092
3-year ThinkPlus Productivity, RS210 (3-year)	45K4094

ThinkServer







Lenovo ThinkServer TD200

Lenovo ThinkServer TD200x



Lenovo ThinkServer TD200



Lenovo ThinkServer TD200x

Type-	Slot x		CH- (Memory		RAID	Dis bay		Disk	RAID	IMM	Power supply(s)	Ftherne	Avail	
Name model TD200 3809-3A TD200 3809-3E	U 6x7	1xE5502	1.86	2	1x2GB	speed 1333MHz 1333MHz	3.5"	None	4xSim	ole-swar	type SATA SATA/SAS	0/1	None None	670W 670W	2xGb	Sep 09	
10200 3009-31	• Easy • Thes	to use wit	th Thin have a	kSer 3-yea	ver Easy ar limited	Startup ar d warranty	nd Eas	yManag	e softwa	are	ller™ Progr		None	07000	ZAGD	Sep 09	
Processor(s)	Intel® X 4.8GT/s 800MH Intel Xe	wo process (eon® Pros s (giga-train z DDR3 meon Proce s QPI, 800	cesson nsfers/ nemory essor E	r E55 secon cont 5550	02 with had) QPI roller, ar with qu	dual-core (QuickPatl nd 4MB ca nad-core,	h Interdiche or),	Front Rear optical Op							
Implementation	Proces	sor uses F	C-LGA	A pac	kage, tw	o LGA136			5110	opt	ical			,			
Memory	2GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC**, Memory Mirroring, twelve 240-pin DIMM sockets***, * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Advanced ECC-enable DIMMs required *** Over six DIMMs requires dual processors										1 - PCle x8 2 - PCle x16 3 - PCle x8 4 - PCle x8 5 - PCle x8 6 - PCl						
Graphics	Matrox [®] Maximu	©G200e in um resolut	tegrate	ed, or 600x1	ne VGA [200@8	DB-15 in re 5Hz	ear, 16	MB;		• Towe	r mechanica	al. racl					
Disk bays Disk Controller	3BU: fo	our 3.5" sir our 3.5" ho AID®-BR1), 1 suppo	t-swap 0i, PC	(ĤS	SÁTA/S	SAS disk b	ays	AS 3GI	o/s,	 Tower mechanical, rack-mountable to 5U Business black color; metal case 8.6"W x 29.4"D x 17.3"H 218mm W x 747mm D x 440mm H 77 lb (35kg) max configuration 							
Optical Diskette Ethernet	None (I	Multi-Burne use USB p gabit Ethei Offload E	ort) rnet po	orts, E	Broadcor	n® 5709C,		xpressl	ous,	ToolleToolleIllum	ess side covess disk and ess adapter inated front shelf suppo	d optic retent icons	al drive r	emoval			
Chipset	links to I/O Cor	5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and to BCM5709C, enterprise south bridge interface (ESI) to Intel Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to VSAS controller. LPC bus to VSC452 for limited Super I/O									Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 3.5", 1" high, external, optional disk						
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) Two USB 2.0, one connector for tape drive, one connector for embedded hypervisor Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium Monitor, SATA/SAS disk, OS								supply)	Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express x8 Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 (x4 electrical) Slot 5: full, PCI Express x8 Slot 6: half-length, 32-bit PCI 2.3							
Keyboard Mouse Power supply(s) Cooling	None (i One 67		ort) andard						al								
Cooling Three fans std, three maximum, variable speed, hot-swap Accessories Intel Xeon Dual-Core Processor E5502 67Y0008 Intel Xeon Quad-Core Processor E5504 67Y0009 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 4GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0016 750GB 3.5" SATA Disk SS (7200 rpm) 45J6198 1TB 3.5" SATA Disk HS (7200 rpm) 45J6204 Other accessories at lenovo.com/accessories							Software Management Tools ThinkServer EasyStartup ThinkServer EasyManage Power-On Hotkey Setup Utility: F1 at startup										
Max internal ca 3AU: 3.0TB with 3BU: 4.0TB with	n four 75									Diagnostic: F2 at startup Network Boot: F12 at startup RAID configuration utility: Ctrl+A at startup							
Virtualization											cover lock (identical			
Virtualization ready, hypervisor connector embedded									• Powe	er-on passw	ord		or arra als	in.o			
 3-year parts a Customer Reselected part ThinkPlus™s 	placeabl s³, 8 am	r e Unit (CR - 5 pm, Mo	n - Fri	ts on cove	ly (with I	luding ho	lidays)			Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)							
Onsite serv Post warra	ice upgi	ade option	ns (in e	eligib			,			ThinkP	lus Priority	Suppo	ort, 90-da	y Trial			
≈ 24 hour x 7 d					e warrar	nty period	via 80	0-426-7	378	RoHS-	compliant						

Type-		isk Disk RAID IMM Power Avail						
Name model TD200 3817-30	bay essor(s) GHz Cores DIMMs speed size Battery batter	7 type iiit i teiniam eappry(e) aate						
* Multi = RAID-0/	 1/5/6/10 support Easy to use with ThinkServer EasyStartup and EasyManage softs These models have a 3-year limited warranty This small and medium business (SMB) model is part of the EME 							
Processor(s) Implementation Memory	Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache Processor uses FC-LGA package, two LGA1366 sockets 4GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, Advanced ECC**, Memory Mirroring, twelve 240-pin DIMM sockets***, * System automatically clocks down for processors with 800MHz DDR3 memory controller *** Advanced ECC-enable DIMMs required *** Over six DIMMs requires dual processors	Front Rear Optical Optical Optical Optical Optical Optical Optical Optical OPSU PSU PSU PSU PSU PSU PSU PSU PSU PSU						
Graphics	Matrox® G200e integrated, one VGA DB-15 in rear, 16MB; Maximum resolution: 1600x1200@85Hz	Q Q Q Q Q S S S S S S S S S S S S S S S						
Disk bays Disk Controller	Four 3.5" hot-swap (HS) SATA/SAS disk bays ServeRAID-MR10i, PCIe bus, SATA 3Gb/s, SAS 3Gb/s, RAID 0, 1, 5, 6, 10, 50 support	Tower mechanical, rack-mountable to 5U Business black color; metal case 8.6"W x 29.4"D x 17.3"H						
Optical Diskette Ethernet	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use USB port) Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing	218mm W x 747mm D x 440mm H 77 lb (35kg) max configuration Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention						
Chipset	Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O	Illuminated front icons Rack shelf support Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8 Slot 2: full-length, full-height, PCI Express x8						
Extender card Front ports Rear ports Internal ports Diagnostics Systems mgmt Prerequisites	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) Two USB 2.0, one connector for tape drive, one connector for embedded hypervisor Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium Monitor, SATA/SAS disk, OS							
Keyboard Mouse Power supply(s) Cooling	None (use USB port) None (use USB port) Two 920 watts standard, two maximum, rear access, hot-swap, redundant with two power supplies Three fans std, three maximum, variable speed, hot-swap							
2GB PC3-10600 4GB PC3-10600 146GB ² 3.5" SA 160GB 3.5" SAT 250GB 3.5" SAT 750GB 3.5" SAT 1TB 3.5" SATA I	Core Processor E5506 67Y0010 DDR3 ECC RDIMM 67Y0015 DDR3 ECC RDIMM 67Y0016 S HS (15000 rpm) 45J6211 A HS (7200 rpm) 45J6200 A HS (7200 rpm) 45J6201 A HS (7200 rpm) 45J6202 A HS (7200 rpm) 45J6202 A HS (7200 rpm) 45J6203 HS (7200 rpm) 45J6203 HS (7200 rpm) 45J6204 es at lenovo.com/accessories	Virtualization Virtualization ready, hypervisor connector embedded Software Management Tools ThinkServer EasyStartup ThinkServer EasyManage Power-On Hotkey Setup Utility: F1 at startup Diagnostic: F2 at startup Network Boot: F12 at startup RAID configuration utility: Ctrl+A at startup Security						
 3-year parts a Customer Re selected part ThinkPlus™ s 	TB HS SATA disks Limited Warranty ¹	Side cover lock (ships with two identical keys) prohibits removal of front panel and disks Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) ThinkPlus Priority Support, 90-day Trial						
 Post warra 	nte upgrade options (in engiste locations) nty maintenance services ay ¹⁴ toll-free support during the warranty period¹ via 800-426-7378	RoHS-compliant						

Name mode			GHz Cor	Memory es DIMMs	Memory speed	Disk size	RAID Battery	Di: ba		Disk type	RAID Int	IMM Premium	Power supply(s)	Ethernet	Avai date				
TD200x 3822-4										SATA/SAS SATA/SAS SATA/SAS	Multi	Premium	2x920W	2xGb	Jul 09				
* Multi = RAID-0			•																
	 Fully 	e models l loaded, hi e small and	gh perfoi		/ Seller™ Prog	gram													
Processor(s)	Processor(s) Up to two processors, one or two processors standard, Intel® Xeon® Processor E5520 or E5530 with quad-core,											Rear	•						
	0000	U																	
Implementation	1066MHz DDR3 memory controller, and 8MB cache plementation Processor uses FC-LGA package, two LGA1366 sockets											optical III							
Memory	RDIMM Memory std men eight so * Syster DDR3 n ** Adva	l, PC3-106 y Mirrorin nory in 2, 3 ockets disti	on 1333 g, sixteer 3, or 6 so ributed in tically clo- portroller renable [MHz DDR3 1 240-pin I ckets, 14, 10 3-chann cks down f				ptical		100 C 00 C 1 - 1 2 - 1 3 - 1 4 - 1 5 - 1 6 - 1	7								
Graphics		G200e, in			DB-15 in r 5Hz	ear, 16	SMB;		Tou	vor mochoni		ak mauntal	alo to ELL						
Disk bays		wap (HS) S m-Form-Fa			5,		• Bus	/er mechani siness black 'W v 20 4"D	color;	metal case									
Disk Controller	ServeR RAID ⁸ 0		0i, PČI E 0, 50, 60	xpress® bu support	is, SATA 30 ed	o/s,	8.6"W x 29.4"D x 17.3"H 218mm W x 747mm D x 440mm H 84 lb (38kg) max configuration Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support												
Optical Diskette Ethernet	None (u Two Gio	ıse USB p gabit Ether	ort) net ports	Broadcor	TA 1.5Gb/s m® 5709C, alancing	us,													
Chipset	(see rig (ESI) to	TCP/IP Offload Engine(TOE), load balancing Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots 1-5 (see right) and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O									Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk								
Extender card Front ports Rear ports		SB 2.0, ext			DB-15), s ement (RJ		9-pin),		Bay 7 2.5", 0.6" high, external, optional disk Bay 8 2.5", 0.6" high, external, optional disk Bay 9 2.5", 0.6" high, external, optional disk Bay 10 2.5", 0.6" high, external, optional disk Bay 11 2.5", 0.6" high, external, optional disk										
Internal ports	Two US	B 2.0, one	connect	or for tape	drive, `	-43)													
Diagnostics	Easy LE with erre	ED Diagno	stics (ope or fans, di	erator infor sks, RAID,	mation pa memory, ¡				Slot 1: half-length, full-height, PCI Express x8 Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 (x4 electrical)										
Systems mgmt Prerequisites	Integrat Trusted IPMI 2.0		ement M Module (1 nt,	odule (IMN PM) 1.2 s	/l) Premiun	n,			Slot 5	5: full, PCI E	xpress								
Keyboard	None (u	ıse USB p	ort)						Virtualization										
Mouse Power supply(s)	Two 920 hot-swa	ιp, auto-se	indard, tw nsing, re	dundant w	m, rear ac	ver sup	oplies		Virtualization ready, hypervisor connector embedded Power-On Hotkey										
Cooling Accessories	Six tans	siu, six m	ıaxımum,	variable S	peed, hot-	swap			• Diag	ip Utility: F1 inostic: F2 a	ıt startı	nb .							
Intel Xeon Qual					67Y001 67Y010					vork Boot: F D configurat	ion util	ity: Ctrl+A							
2GB PC3-1060 300GB ² 2.5" SA 500GB 2.5" SA Other accessor	0 DDR3 AS SFF H TA SFF H	1333 MHz IS (10000 IS (7200 r _l	RDIMM rpm) pm)	ies	67Y001 67Y011 67Y012	5 8			Software Management Tools ThinkServer EasyStartup ThinkServer EasyManage										
Max internal c 4.0TB with eigh	apacity	SATA SFF							Security Side cover lock (ships with two identical keys) prohibits removal of front panel and disks Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)										
 3-year parts Customer Reselected part 	eplaceable ts3, 8 am -	e Unit (CR - 5 pm, Mo	U) parts on - Fri co	only (with liverage exc	luding hol	idays)													
 ThinkPlus™ : Onsite ser 	vice upar	ade option	ns (in elia			ranty				Plus Priorit		,	/ Trial						
	 Onsite service upgrade options (in eligible locations)⁷ Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 									RoHS-compliant									

	Гуре-	Slot x	Proc-			Memory	Memory	Disk	RAID	Disl	k	Disk	RAID	IMM	Power		Avail		
	nodel	bay	essor(s)			DIMMs	speed 1333MHz		Batter: No	-		type	Int S4_0/1/10	Premium Premium	supply(s)				
TD200x 382							1333MHz		No					Premium					
	•	Fully	e models l loaded, hi e small an	igh peri	form	ance tov	ver comp	uting, a					rogram						
Intel® Xeon® Processor E5504 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5520 with quad-core, 5.86GT/s QPI, 1066MHz DDR3 memory controller, and 8MB cache										Front (48U only) Rear optical optical									
Implementati Memory												optical		000					
Welliory	R N si e * 1	DIMM lemory d men ght so Syster 066 MI Advar	, PC3-106 y Mirrorin nory in 1 s ckets dist	600 133 13 g, sixtes socket, ributed tically comemon comemon comemon	en 2 15 s into lock y co	Iz DDR3 240-pin I ockets a 3-chann s down f ntroller MMs req	8*, Advan DIMM soc vailable** iel per pro or proces uired	Drocessor), divanced ECC**, M sockets, ble***, er processor (3-3-2) ocessors with 800MHz or lists ssors											
Graphics	N N	latrox® <i>laximu</i>	G200e, ir m resoluti	ntegrate ion: 16	ed, o 00x	ne VGA I 200@8	DB-15 in 5Hz		• Bu	siness bla	ack color;	ck-mountal metal case 3"H							
Disk bays		8U: €	our 3.5" height HS S	SATA/S	۹Śd	iśk bays	,	bays			 8.6"W x 29.4"D x 17.3"H 218mm W x 747mm D x 440mm H 84 lb (38kg) max configuration Toolless side cover removal 								
Disk Controll		erveR	AID [®] M10 1, 10 sup	15, PC				Gb/s, S	SAS 60	Bb/s,	• To	olless dist olless ada	cand opti pter rete	cal drive re ntion	emoval				
Optical Diskette Ethernet	N T	one (u vo Gig	fulti-Burne se USB p abit Ether Offload E	ort) rnet poi	ts, E	Broadcor	m® 5709C		Expres	s bus,	Illuminated front icons Rack shelf support 47U: Bay 1 5.25",1.6" high, external, std optical								
Chipset	(s (E P	TCP/IP Offload Engine(TOE), load balancing Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots 1-5 (see right) and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O									Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk								
Extender care Front ports Rear ports	Ti F		B 2.0, ext						9-pin),		Bay 7 3.5", 1" high, external, optional disk 48U: Bay 1 5.25",1.6" high, external, std optical								
Internal ports	s T	wo US	ernet (RJ- B 2.0, one	e conne	ctor	for tape	drive, `	J-45)			Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk								
Diagnostics	E w	asy LE ith erro	nector for ED Diagno or LEDs fo	stics (c or fans,	pera disk	ator infor s, RAID,	mation pa memory,												
Systems mgr	mt Ir Ti IF	itegrate rusted PMI 2.0	or module, ed Manag Platform I)-compliar SATA/SA	jement Module nt,	Mod (TP	ule (IMN	/l) Premiu	m,			Bay 7 2.5", 0.6" high, external, optional disk Bay 8 2.5", 0.6" high, external, optional disk Bay 9 2.5", 0.6" high, external, optional disk Bay 10 2.5", 0.6" high, external, optional disk Bay 11 2.5", 0.6" high, external, optional disk								
Keyboard	N	one (u	se USB p	ort)	-						1		Ū	•					
Mouse Power supply Cooling	/(s) C h	ne 920 ot-swa	se USB p 0 watts sta p, auto-se std, six m	andard, ensing,	redu	ndant w	ith two po	wer su	pplies		Slot 1: half-length, full-height, PCI Express x8 Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 (x4 electrical) Slot 5: full, PCI Express x8								
2GB PC3-10	0600 F	DR3 1	333 MHz	Acce		ries			67Y0	015	Slot	6: half-ler	<u> </u>	neight, 32-l		3			
4GB PC3-10 Other acces	0600 E	DR3 1	333 MHz	RDIM	Λ	6			67Y0		Power-On Hotkey • Setup Utility: F1 at startup • Diagnostic: F2 at startup • Network Boot: F12 at startup								
Virtualization	n read	y hype	ervisor cor	Virtua							RAID configuration utility: Ctrl+A at startup								
v ii tualizatiOl	rieau	y, riype				ement T	ools							Security s with two i front pane	dentical k				
ThinkServe	er Easy	/Startu				, ,	je				J ∙ Pc	wer-on pa	assword	•	, and dist				
 ⇒ 3-year par ⇒ Customer selected principle ⇒ ThinkPlus 	r Repla parts³, s™ ser	ceable 8 am - vices a	unit (CR 5 pm, Mo available;	n - Fri o see len	s on cove	ly (with l rage exc com/thir	luding honk kplus/wa	lidays		or	Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)								
	arranty	maint	enance se	ervices	•		,	·			ThinkPlus Priority Support, 90-day Trial								
 Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 									RoHS-compliant										

Tuno	Slot x	Proc-		N/I	lomory	Memory	Disk		Dis	k	Disk	RAID		Power		Avail			
Name Type- model	bay	essor(s)		ores D	DIMMs	speed	size	Disk(s)	bay	rs .	type	Int	Optical	supply(s)		date			
TD200 3724-38 TD200 3724-39	U 6x11	1xE5502 1xE5502 e models	1.86	2 1	x2GB		2.5"	None None	4xHot-9	swap swap	SATA/SAS ⁴ SATA/SAS	0/1 0/1	DVDRW DVDRW	670W 670W	2xGb 2xGb	Jul 09 Jul 09			
Intel® Xeon® Processor E5502 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache										Front* Rear OBOCCOC Optical Optical Optical Optical Optical Optical OPTICA III III III III III III III III III									
Implementation Processor uses FC-LGA package, two LGA1366 sockets Memory 2GB std, 96GB max (48GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring, twelve 240-pin DIMM sockets, std memory in 1 socket, 11 sockets available****, ** System automatically clocks down for processors with 800MHz DDR3 memory controller *** Advanced ECC-enable DIMMs required **** Over six DIMMs requires dual processors																			
Graphics		G200e in Im resolut					r							PCIe x8 PCI					
Disk bays Disk Controller	Maximum resolution: 1024x768@85Hz 38U: four 3.5" hot-swap (HS) SATA/SAS disk bays 39U: eight hot-swap (HS) SATA/SAS disk bays, 2.5" Slim-Form-Factor (SFF) ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use optional USB diskette) Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, a PCI slot, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O										* Only 2.5" SFF SATA/SAS model shown • Tower mechanical, rack-mountable to 5U • Business black color; metal case • 8.6"W x 29.4"D x 17.3"H • 218mm W x 747mm D x 440mm H • 77 lb (35kg) max configuration • Toolless side cover removal • Toolless adapter retention								
Optical Diskette Ethernet																			
Chipset											Toolless adapter retention Illuminated front icons Rack shelf support Model with 3.5" disk bays: Bay 1 5.25",1.6" high, external, std optical								
Extender card Front ports Rear ports Diagnostics Systems mgmt Prerequisites	two ether Diagnost RAID, n Integrat upgrade	SB 2.0 SB 2.0, exernet (RJ- stic LEDs nemory, pred Manageable to IN c, SATA/SA	45), sys (system rocesso jement MM Prei	stem n n-error rs, vol Modul mium	nànage r LED c Itage re	ement (RJ on front co egulator m	-45) ver; er iodule,	ror LED	supply)	Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Model with 2.5" disk bays: Bay 1 5.25",1.6" high, external, optional optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk									
Keyboard Mouse Power supply(s) Cooling	None (u None (u one 670	use USB p use USB p D watts sta	ort) ort) indard,	one m	naximu n, varia	m, rear ac ble speed	cess, , hot-s	universa wap	ıl										
										Bay 7 2.5", 0.6" high, external, optional disk Bay 8 2.5", 0.6" high, external, optional disk Bay 9 2.5", 0.6" high, external, optional disk Bay 10 2.5", 0.6" high, external, optional disk Bay 11 2.5", 0.6" high, external, optional disk Slot 1: half-length, full-height, PCI Express x8 Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 Slot 5: full, PCI Express x8 Slot 6: half-length, 32-bit PCI 2.3									
ThinkServer E	asvStartı		are Ma ı kServer	_						Power-On Hotkey									
Max internal ca 38U: 4.0TB with 39U: 2.4TB with	apacity n four 1T	B SATA di	sks							Setup Utility: F1 at startup Diagnostic: F2 at startup Network Boot: F12 at startup RAID configuration utility: Ctrl+A at startup Security Side cover lock (ships with two identical keys) - prohibits removal of front panel and disks Power-on password Administrator password									
Virtualization Virtualization re one internal US	ady, hyp	ervisor co r virtualiza	nnector	embe pervis	edded, or														
 3-year parts a Customer Re selected part ThinkPlus™s 	placeables, 8 am es ervices	e Unit (CR 5 pm, Mo available;	U) part on - Fri o see len	s only covera	(with I	luding ho kplus/war	lidays)	rvice fo	•	Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)									
 Onsite serven Post warrant 24 hour x 7 d 	nty main	tenance s	ervices	_			via 80	0-426-7	378	ThinkPlus Priority Support, 90-day Trial RoHS-compliant									
24 hour x 7 day ¹⁴ toll-free support during the warranty period¹ via 800-426-7378									Hoho-compilant										

Type- Name model	Slot x bay	Proc- essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	Disk(s)		isk ays	Disk type	RAID Int	Optical	Power supply(s)	Ethernet	Avail date				
TD200 3824-37		1xE5502		2		1333MHz	3.5"	None 4x	Simp	ole-swa			DVDRW		2xGb	Jul 09				
	• Easy		th Thir	ıkSerı	er Easy	Startup an		and prove Manage so			design									
Processor(s) Up to two processors, one processor standard, Intel® Xeon® Processor E5502 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache Implementation Processor uses FC-LGA package, two LGA1366 sockets											Front Rear optical PSU									
Memory	2GB st RDIMN Memor std me * Syste DDR3 ** Adva	d, 96GB n I, PC3-106 ry Mirrorir mory in 1 sem automa memory co anced ECC er six DIMM	nax (48 600 13 ng, two socket tically ontrolle C-enab	BGB p 33MH elve 24 , 11 se clocks er le DIN	per proce Iz DDR3 40-pin DI bockets av s down fo	ssor), *, Advanc MM socke vailable*** or process		optical optical												
Graphics		® G200e in um resolut					•			<u> </u>	1717			- PCI						
Disk bays Disk Controller		5" simple- ATA, SATA											ack-mount		U					
Optical Diskette Ethernet	Serial ATA, SATA 3Gb/s, integrated in ICH10 Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s None (use optional USB diskette) Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), Load balancing										Business black color; metal case 8.6"W x 29.4"D x 17.3"H 218mm W x 747mm D x 440mm H 77 lb (35kg) max configuration Toolless side cover removal									
Chipset	links to		9C, ent b 10 (I	erpris	se soùth l	bridge inte	erface (ss slots and (ESI) to Inte bus to		 Toolless disk and optical drive removal 										
Extender card Front ports Rear ports Diagnostics Systems mgmt Prerequisites	None Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) Diagnostic LEDs (system-error LED on front cover; error LEDs for RAID, memory, processors, voltage regulator module, power supply Integrated Management Module (IMM) std, IPMI 2.0-compliant, upgradeable to IMM Premium Monitor, SATA disk, OS										Bay 1 5.25",1.6" high, external, std optical Bay 2 5.25",1.6" high, external, optional optical Bay 3 5.25",1.6" high, external, optional optical Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express x8									
Keyboard Mouse Power supply(s) Cooling	None (None (One 67	use USB puse USB pose USB pose USB pose pose pose pose pose pose pose pose	oort) oort) andard							Slot 2: full, PCI Express x16 (x8 electrical) Slot 3: full, PCI Express x8 (x4 electrical) Slot 4: full, PCI Express x8 (x4 electrical) Slot 5: full, PCI Express x8 Slot 6: half-length, 32-bit PCI 2.3										
Accessories 1GB PC3-10600 2GB PC3-10600 4GB PC3-10600 160GB* 3.5" Sim 250GB 3.5" Sim 750GB 3.5" Sim USB Portable D Lenovo® TV L15 Other accessori	DDR3 DDR3 DDR3 nple-swa ple-swa ple-swa ple-swa iskette [1 15-inc	1333 MHz 1333 MHz ap SATA 3. p SATA 3.0 p SATA 3.0 p SATA 3.0 Drive ch Analog	RDIM RDIM .0Gb/s .0Gb/s .0Gb/s .0Gb/s .0Gb/s	IM IM Disk Disk (Disk (Disk (7200 rpr 7200 rpr 7200 rpr	67Y 67Y m) 45J n) 45J n) 45J n) 45J 05K	70014 70015 70016 6195 6196 6197 6198 (9276 5AC6													
Think Conver Fr	o o v Cto vt			_	ement To					• Setup	Utility: F		wer-On H	otkey						
ThinkServer Ea Max internal ca	apacity	•		ar ⊏as	yivianag					Diagnostic: F2 at startup Network Boot: F12 at startup RAID configuration utility: Ctrl+A at startup										
3.0TB with four	750GB \$	SATA disks	3						_				Securi		Р					
Virtualization Virtualization re one internal US										- pro	hibits re er-on pas	moval o	os with two of front par	identica nel and d	ıl keys) lisks					
 Customer Re selected part 	Limited Warranty¹ 1-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty									BootBootSeria	nistrator sequent without Il port I/C port disa	ce cont keyboa) contre	rol .rd, mouse ol	, diskette)					
Onsite serv Post warrar	ice upg	rade optio	ns (in	eligib			· wiity			ThinkP	lus Prior	ity Sup	port, 90-d	ay Trial						
≈ 24 hour x 7 da					e warran	ty period ¹	via 800	0-426-7378		RoHS-	compliar	nt								





Lenovo® ThinkServer RD210



Lenovo ThinkServer RD220 (8 Disk Bays plus Tape Drive)



Lenovo ThinkServer RD220 (12 Disk Bays)



Lenovo ThinkServer RD220

Type- Name model	Slot x bay	Proc- essor(s)	GHz Core		Memory speed	Disk size	RAID Battery	Disk bays		Disk type	RAID Int	IMM Premiu	Power m supply(s)	Etherne	Avail t date
RD210 3795-21	U 2x7	1xE5502	1.86 2	1x1GB	1333MH	z 2.5"	None	6xHot-s	wap (SATA/SA	S ⁴ 0/1	None	1x675W	2xGb	May 09
			as a 1-yea d medium			odel is	part of	the US Top	oSelle	er™ Prog	ıram				
Processor(s)			essors, one						1U F	Rack top)		Front		
	4.8GT	/s (giga-t	ransfers/se memory c	cond) Qf	PI (QuickF	ath Int		ct),	0	٦	Riser			disk optio	======================================
Implementation	Proces	ssor uses	FC-LGA p	ackage,	two LGA1				Opt PSU	owei	er sk		uisk uisk	uisk Optio	al
Memory	RDIMI Memo standa eight s ** Sys DDR3 *** Ad	M, PC3-1 ory Mirro ard memo sockets di tem auto memory vanced E	B max (640 0600 1333 ring, sixtee ory in 1 soc distributed in matically cl controller CC-enable DIMMs rec	MHz DD en 240-pii ket, 15 so to 3-cha ocks dow	R3**, Adv n DIMM s ockets ava nnel per p vn for prod reguired	ockets ailable' process cessor	sor (3-3-2	2)	Rear CPU Sockets CPU Sockets					Opt PSU PSU	
Graphics	Matrox	«® G200e,	integrated	I, two VG	A DB-15 (-	nd rear),	8MB;			Memory sockets				
Disk bays Disk Controller Optical Diskette Ethernet	Servel RAID ⁸ UltraS None Two G Broad	RAID®-BF 0, 1 supp lim Enha (use USE igabit Eth com® 570	nced DVD±	Express® I ERW s, TCP/IP ed over F	ous, SATA Offload E Oclebus, I	3Gb/s Engine oad ba	s, ŠAS 30 (TOE), llancing,	Gb/s,	fan fan fan fan fan fan optical 1 U Mechanical; rack-mount only Black color front; metal case 17.3"W x 27.5"D x 1.75"H						
Chipset	links to	o BCM57 ontroller F	oset, Intel I 09C, enter lub 10 (ICH bus to VS0	prise sou 110) for U	th bridge JSB, PCIe	interfa links t	ce (ESI) to SATA/S	to Intel	• 34 • Too	.5 lb (15. olless top olless dis		x config emoval otical dri			
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt Prerequisites	Two U Two U two etl One U Easy L inform Integra Truste upgrad	rtible via on SB 2.0, estable via on SB 2.0, estable should be sho	o PCI Exproptional risexternal mo systemal mo J-45), systector for er nostics (pu agement by m Module (IMM Premard, mouse	er card(s nitor (VG nitor (VG em mana nbedded ill-out ope em-error I lodule (IN TPM) 1.2 ium) to 64-bit A DB-15) A DB-15) Agement (hypervisc erator info LED) MM) std, II support,	133M , serial RJ-45) or rmatio PMI 2.0	(9-pin), n panel v 0-compli	vith	Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Bay 1 5.25", 0.5" high, external, optional disk Bay 2 2.5", 0.6" high, external, optional disk Bay 3 2.5", 0.6" high, external, optional disk Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Slot 1: low-profile, Slot 2: half-length, full-height, PCI Express 2.0 x16						
Keyboard Mouse Power supply(s) Cooling	None One 6 redund	dant with		supplies	·			sing,							
Accessories Intel Xeon Dua 1GB PC3-1060 2GB PC3-1060 4GB PC3-1060 73GB ² 2.5" SA 146GB 2.5" SA 300GB 2.5" SA 500GB 2.5" SA Other accessor	00 DDR3 00 DDR3 00 DDR3 S SFF H S SFF H TA SFF	3 1333 MI 3 1333 MI 3 1333 MI IS (15000 IS (1000 IS (1000 IS (7200	Hz RDIMM Hz RDIMM Hz RDIMM) rpm) 0 rpm) 0 rpm)) rpm)		67Y(67Y(67Y(67Y(67Y(67Y(67Y(0014 0015 0016 0115 0116 0118			• Dia	gnostic:	/: F1 at st F2 at sta ot: F12 a	tartup rtup t startu			
Max internal c 3.0TB with six 8			disks								Softwar r EasySta r EasyMa	artup	agement To	ols	
Virtualization	a also les			اداده مامد	-l								urity		
Limited Warranty¹ □ 1-year parts and labor □ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) □ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)²						or	AdBdBdSe	Iministra oot seque oot witho erial port	bassword tor passwence conf ut keyboa I/O contr lisableme	vord trol ard, moi ol	use, diskette)			
Onsite serPost warra	vice upo inty mai:	grade opt ntenance	ions (in eli services	gible loca	ations) ⁷				Thin	kPlus Pr	iority Sup	oport, 9	0-day Trial		
≈ 24 hour x 7 c				the war	ranty peri	od¹ via	800-426-	7378	RoH	S-compl	iant				

Type- Name model	Slot x bay	Proc- essor(s)	GHz C	Memo	ry Memo s spee		Disk size	RAID Battery	Disk bays		Disk type	RAID Int	IMM Premiun	Power n supply(s)	Etherne	Avai t date
RD210 3796-270 RD210 3796-230 * Multi = RAID-0/	J 2x7 J 2x7 /1/5/6/1 • The • Eas	1xE5506 0/50/60 s ese model sy to use i	2.13 upport s have with Thi	4 1x2G a 3-year li nkServer	EasyStar	Hz rrani tup a	2.5" ty¹ and E		6xHot-si	wap are	SATA/SA: SATA/SA:	S Multi [*]	None	2x675W	2xGb	May 09 May 09
Duran and a (a)					•											
Processor(s)	Intel® 4.8GT 800M	Xeon® P i /s (giga-ti Hz DDR3	rocess ransfers memoi	one proce or E5504 s/second) ry controlle	or E5506 QPI (Quier, and 41	with ckPa dB c	th Intache	erconne	ct),		Rack top	Riser			sk optica	======================================
Implementation Memory	2GB s RDIM Memo stands eight s ** Sys or 106 *** Ad	2GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring, sixteen 240-pin DIMM sockets, standard memory in 1 socket, 15 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller							PSU PSU							
Graphics	Matro	x® G200e,	integra	ted, two \ 1280x102	GA DB-1			nd rear),	8MB;			Memory sockets	ш			
Disk bays Disk Controller Optical Diskette Ethernet	27U: \$3Gb/s 23U: \$ 0, 1, 5 Ultras None Two G Broad	ServeRAll , RAID® 0 ServeRAll 5, 6, 10, 5 Slim Enha (use USE Bigabit Eth lcom® 570	D®-BR1 , 1 supp D-MR1 0 supp nced D 1 port nernet p 19 ope	Di, PCIe bi ort	press® bu is, SATA 'IP Offloa ' PCIe bu	us, S 3Gb ud Er s, lo	SATA S /s, S/ ngine ad ba	3Gb/s, S AS 3Gb/s (TOE), llancing,	AS s, RAID	 1U Mechanical; rack-mount only Black color front; metal case 17.3"W x 27.5"D x 1.75"H 440mm W x 711.4mm D x 43mm H 34.5 lb (15.6kg) max configuration 						
Chipset	links t	o BCM57 ontroller F	09C, er lub 10 (tel I/O Hub terprise s ICH10) fo /SC452 fo	oùth brid 'USB, P	ge ir Cle I	nterfa inks t	ce (ESI) o SATA/:	to Intel	Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Bay 1 5.25", 0.5" high, external, std optical Bay 2 2.5", 0.6" high, external, optional disk Bay 3 2.5", 0.6" high, external, optional disk Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Slot 1: low-profile, PCI Express 2.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x16						
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt Prerequisites	Two U Two U Two U two el One U Easy inform Integr Truste upgra	rtible via of ISB 2.0, ed ISB 2.0, ed ISB 2.0, ed ISB connot LED Diagnation LEI ated Manada Platforr deable to	optiona external external J-45), sector fo nostics D and se agement m Modu IMM Pi	xpress 2.0 riser card monitor (\) monitor (\) ystem ma r embedd (pull-out o ystem-erro th Module le (TPM) emium use, SATA	(s) to 64 'GA DB- 'GA DB- nagement ed hyperv perator in or LED) (IMM) sto .2 suppo	-bit 1 15) 15), : 15), : nt (R visor nforr d, IPI ort,	serial J-45) mation MI 2.0	(9-pin), n panel v D-compli	vith					6 6		
Keyboard Mouse Power supply(s) Cooling	None Two 6 redun	dant with	B port) standar two pov	d, two ma ver suppli um, varial	es				sing,	Virti	valization		Virtualiz	zation r connector	ombodd	lod
Cooling Six fans std, six maximum, variable speed, hot-swap Accessories Intel Xeon Dual-Core Processor E5504 67Y0007 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 300GB² 2.5" SAS SFF HS (10000 rpm) 67Y0118 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 Other accessories at lenovo.com/accessories							• Se	tup Utility: agnostic: F twork Boo	Po F1 at st F2 at sta ot: F12 a	wer-On cartup rtup t startup						
ThinkServer E ThinkServer E							EasySta	artup	30mont 100							
Max internal capacity 3.0TB with six 500GB SATA SFF disks Limited Warranty¹							or	AcBcBcSc	ower-on pa dministrate bot sequer bot withou erial port I. SB port di	or passw nce cont t keyboa O contro	rol ird, mous ol	se, diskette				
Onsite servPost warra	 Onsite service upgrade options (in eligible locations)⁷ Post warranty maintenance services 							7070	ThinkPlus Priority Support, 90-day Trial							
24 hour x 7 d	2 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378								-7378	RoHS-compliant						

Disk **RAID** Disk RAID IMM Slot x Proc-Memory Memory Disk Power Avail Type-Premium supply(s) Ethernet Battery Name model bay essor(s) GHz Cores DIMMs speed size bavs type Int 1333MHz 2.5" Battery 6xHot-swap SATA/SAS4 Multi* Premium 2x675W 2xGb May 09 **RD210** 3796-2CU 2x7 1xE5540 2.53 4 2x2GB * Multi = RAID-0/1/5/6/10/50/60 support This model has a 3-year limited warranty Easy to use with ThinkServer EasyStartup and EasyManage software This small and medium business (SMB) model is part of the US TopSeller™ Program Up to two processors, one processors standard, Intel® Xeon® Processor E5540 with quad-core, 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 1U Rack top Processor(s) Front Riser Riser disk disk disk 1066MHz DDR3 memory controller, and 8MB cache Processor uses FC-LGA package, two LGA1366 sockets Power supply Power supply disk disk disk optical Implementation slot Slot 4GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring, sixteen 240-pin DIMM sockets, Memory N Rear std memory in 1 socket, 15 sockets available** PSU 1 - PCle x16 2 - PCle x16 eight sockets distributed into 3-channel per processor (3-3-2) System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memóry controller ***Advanced ECC-enable DIMMs required Memc **** Over eight DIMMs requires dual processors Matrox® G200e, integrated, two VGA DB-15 (front and rear), 8MB; Maximum resolution: 1280x1024@60Hz Graphics 6 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std ServeRAID®-MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, Disk bays fan fan fan fan fan fan Disk Controller RAID⁸ 0, 1, 5, 6, 10, 50 support, Battery backed cache integrated disks optical Optical UltraSlim Enhanced DVD±RW · 1U Mechanical; rack-mount only Diskette None (use USB port) · Black color front; metal case Two Gigabit Ethernet ports, TCP/IP Offload Engine(TOE), Broadcom® 5709C operated over PCIe bus, load balancing, Ethernet • 17.3"W x 27.5"D x 1.75"H 440mm W x 711.4mm D x 43mm H upgradeable to 4 int ethernet ports via optional daughter card 34.5 lb (15.6kg) max configuration Toolless top cover removal
Toolless disk and optical drive removal Chipset Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Riser card (See Right) Two PCI Express 2.0 x16 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X 5.25",0.5" high, external, std optical 5.25 , 0.5 nigh, external, 2.5", 0.6" high, external, Two USB 2.0, external monitor (VGA DB-15)
Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), optional disk Front ports Bay 2 Rear ports Bay з optional disk two ethernet (RJ-45), system management (RJ-45) One USB connector for embedded hypervisor Bay 4 optional disk Internal port Bay 5 optional disk Easy LED Diagnostics (pull-out operator information panel with Diagnostics Bay 6 optional disk information LED and system-error LED) Bay 7 optional disk Systems mgmt Integrated Management Module (IMM) Premium, Slot 1: low-profile, PCI Express 2.0 x16 IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support Slot 2: half-length, full-height, PCI Express 2.0 x16 Monitor, keyboard, mouse, SATA/SAS disk, rack, OS Prerequisites Keyboard None (use USB port) None (use USB port) Mouse Power supply(s) Two 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies Cooling Six fans std, six maximum, variable speed, hot-swap Accessories Intel Xeon Quad-Core Processor E5540 67Y0096 73GB² 2.5" SAS SFF HS (15000 rpm) 146GB 2.5" SAS SFF HS (10000 rpm) 300GB 2.5" SAS SFF HS (10000 rpm) 67Y0115 67Y0116 Power-On Hotkey 67Y0118 Setup Utility: F1 at startup 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 Diagnostic: F2 at startup Other accessories at lenovo.com/accessories Network Boot: F12 at startup **Software Management Tools** Max internal capacity ThinkServer EasyStartup ThinkServer EasyManage 3.0TB with six 500GB SATA SFF disks Virtualization Security Virtualization ready, hypervisor connector embedded Power-on password Administrator password Limited Warranty¹ Boot sequence control 3-year parts and labor Boot without keyboard, mouse, diskette Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)
ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Serial port I/O control USB port disablement (front or all) Onsite service upgrade options (in eligible locations) ThinkPlus Priority Support, 90-day Trial Post warranty maintenance services
 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 RoHS-compliant

Name	Type- model	Slot x bay	Proc-	GHz Core		Memory speed	Disk size	RAID Battery	Disk bays		Disk type	RAID Int	IMM Premium	Power supply(s)	Etherne	Avail t date
			. ,			1333MHz					SATA/SAS		None	1x675W		
		• This	model h	as a 1-year	limited v	varranty ¹										
Process		Intel® 2 4.8GT/ 800MF	Xeon® Pı /s (giga-tı lz DDR3	essors, one rocessor E ransfers/se memory co	5502 wit cond) QF ontroller,	h dual-co PI (QuickF and 4MB	o re , Path Int cache		et),	1U Rack top Front Gisk disk disk disk disk disk disk disk d						
Impleme Memory				FC-LGA p B max (640				CKEIS								
Memory		RDIMN Memor standa eight s *** Syst DDR3 *** Adv	M, PC3-10 ry Mirron and memo ockets di dem autor memory vanced E	0600 1333 ring, sixtee ry in 1 soc stributed in matically cl- controller CC-enable DIMMs req	MHz DDI n 240-pir ket, 15 so ito 3-chai ocks dow DIMMs r	R3**, Adv n DIMM so pockets ava nnel per p n for proc	ranced ockets, ailable* process cessor	***, or (3-3-2								PSU PSU
Graphics	S			integrated ution: 1280			front a	nd rear),	8MB;			ets ory	_			
Disk bay Disk Cor Optical		ServeF) disk bays R10i, PCI E port						fan disk			n fan			
Diskette Ethernet		Two Gi	igabit Eth Offload	onal USB d lernet ports Engine(TC 4 int etherr	s, Broadc E), load	balancing	١,		·	1U Mechanical; rack-mount only Black color front; metal case 17.3"W x 27.5"D x 1.75"H 440mm W x 711.4mm D x 43mm H						
Chipset		links to	BCM570 ntroller H	oset, Intel I 09C, enterplub 10 (ICH bus to VSC	orise soù I10) for U	th b ^r idge ISB, PCIe	interfac links t	ce (ESI) t o SATA/S	o Intel	• 34.5 • Too • Too	5 lb (15.6k Illess top d Illess disk	g) max over re and op	configu emoval etical driv			
Riser ca Front po Rear poi	rts	conver Two US Two US	tible via o SB 2.0, e SB 2.0, e	PCI Expre optional rise xternal mo xternal mo J-45), syste	er card(s nitor (VG nitor (VG) to 64-bit A DB-15) A DB-15)	133MI , serial	(9-pin),		Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Bay 1 5.25",0.5" high, external, optional optical Bay 2 2.5", 0.6" high, external, optional disk Bay 3 2.5", 0.6" high, external, optional disk Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk					al	
Internal Diagnos	tics	Easy L informa Integra Trusted	ED Diag ation LED ated Mana d Platforn	ector for en nostics (pu o and syste agement M n Module (II-out ope m-error l lodule (IN TPM) 1.2	erator info LED) MM) std, II	rmatior	•							0	
Prerequi	isites			IMM Premi ard, mouse		AS disk, r	ack, O	S			1: low-prof 2: half-lenç			PCI Expres		
Keyboar Mouse Power si		None (One 67 redund	lant with		supplies	•	•		sing,	Slot 2: half-length, full-height, PCI Express 2.0 x16						
Access	sories				-		<u>'</u>			,						
1GB PC 2GB PC 4GB PC 73GB ² : 146GB 300GB USB PC Lenovo	C3-10600 C3-10600 2.5" SAS 2.5" SAS 2.5" SAS ortable D © TV L15	DDR3 DDR3 DDR3 SFF H SFF H SFF H iskette I	1333 MH 1333 MH 1333 MH S (15000 HS (10000 Drive ch Analog	Hz RDIMM Hz RDIMM Hz RDIMM () rpm) () rpm) () rpm) () rpm)	itor	67Y(67Y(67Y(67Y(67Y(67Y(05K(9165	0014 0015 0016 0115 0116 0118			Power-On Hotkey • Setup Utility: F1 at startup						
Other a	ccessori	es at le	novo.coi	m /accesso	ries					 Diac 	gnostic: F2 work Boot	at star	rtup [*]			
	lax internal capacity .8TB with six 300GB SATA/SAS SFF disks									S ikServer E ikServer E	asySta	artup	gement Too	ols		
	Ilization Iization ready, hypervisor connector embedded								. Por	ver-on pas	CMORD	Secu	rity			
		J. JI		Limited W						Adr	ninistrator	passw	ord			
Custom select ⇒ Thinl	-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for elected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) hinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations)							or	BooSer	ot sequend ot without l rial port I/C B port disa	keyboa) contro	rd, mous ol	se, diskette or all)			
• On • Pos	site serv st warrar	ice upg ity mair	rade opti	ons (in eliq services	gible loca	tions) ⁷				ThinkPlus Priority Support, 90-day Trial						
≈ 24 hc	 Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 						7378	RoHS-compliant								
See footr	notes for i	mportar	nt warrant	y informatio	n										(Lenovo

US models withdrawn effective December 2009

Name	Type- model	Slot x bay	Proc-	GHz Core		Memory	Disk size	RAID Battery	Disl bays		Disk type		IMM Premiur	Power n supply(s)	Ethernet	Avail t date
			. ,	1.86 2					6xHot-s		SATA/S		None	1x675W	2xGb	May 09
				as a 3-yea												,
Process	` ,	Intel® 4.8GT 800MF	Xeon® P i /s (giga-ti Hz DDR3	essors, one rocessor I ransfers/se memory o FC-LGA p	5502 wi econd) Q ontroller,	th dual-co PI (QuickF and 4MB	ore, Path Inf cache		ect),		Rack to	_ 1	!		disk optio	
Memory		1GB s RDIMI Memo standa eight s *** Sys DDR3 *** Adv	td, 128Gi M, PC3-1 ory Mirron ard memo sockets di tem autor memory vanced E	B max (64) 0600 1333 ring, sixtee ory in 1 soo istributed in matically controller CC-enable DIMMs rec	GB per per per per 240-picket, 15 sento 3-chalocks dove	rocessor), R3**, Adv n DIMM s ockets ava nnel per p vn for proce	anced ockets ailable process cessor	I ECC *** **** sor (3-3-	2)	Opt PSU	Viddir	Memory sockets		Rear	PCIe x16	PSU
Graphic	s	Matrox	«® G200e,	integrated	l, two VG	A DB-15 (nd rear)	, 8MB;			Memory sockets				
Disk bay Disk Co Optical Diskette Etherne	ntroller	Servel RAID ⁸ None None Two G TCP/II	RAID®-BF 0, 1 supp (use option igabit Ether Offload	onal USB on ernet port Engine(TO	Express® liskette) s, Broado DE), load	bus, SATA com® 5709 balancing	. 3Gb/s 9C, PC I,	s, SAS 3	Gb/s,	fan fan fan fan fan optical 1 U Mechanical; rack-mount only Black color front; metal case						
Chipset		Intel 5 links to I/O Co	520 Chip BCM57 Introller H	4 int ether oset, Intel 09C, enter lub 10 (ICH bus to VS0	/O Hub (prise sou H10) for l	IOH) for F ith bridge JSB, PCIe	CI Exp interfa	oress slo ce (ESI) to SATA/	ts and to Intel	• 44 • 34 • To	10mm W 1.5 lb (15 oolless to oolless d		nm D x 4 x configi emoval otical dri			
Front po Rear po Internal Diagnos Systems	orts irts port stics	Two U Two U two etl One U Easy I inform Integra Truste	rtible via of SB 2.0, et SB 2.0, et SB 2.0, et hernet (RISB connuLED Diag ation LEI ted Mand Platforr	o PCI Exproptional risexternal moexternal moexternal moexternal moexternal moexternal moestics (pure of and system of any of moestics (pure of any of any of moestics) and system of moestics (pure of any of moestics) and system of moestics (pure of any of	er card(sonitor (VC) sonitor (VC) sem mana mbedded ill-out op em-error flodule (II TPM) 1.2	s) to 64-bit AA DB-15) AA DB-15) agement (hyperviso erator info LED) MM) std, I	133M , serial RJ-45) or rmatio	(9-pin), n panel	with	Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Bay 1 5.25", 0.5" high, external, optional optical Bay 2 2.5", 0.6" high, external, optional disk Bay 3 2.5", 0.6" high, external, optional disk Bay 4 2.5", 0.6" high, external, optional disk Bay 5 2.5", 0.6" high, external, optional disk Bay 6 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Bay 1 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Bay 7 2.5", 0.6" high, external, optional disk Slot 1: low-profile, PCI Express 2.0 x16						
Prerequ	isites			ard, mouse		AS disk, r	ack, O	S					l-height,	PCI Expre		
Keyboar Mouse Power s		None One 6 redund	dant with		supplies		•		nsing,							
Acces	sories									Ĭ						
1GB P 2GB P 4GB P 73GB ² 146GB	C3-10600 C3-10600 2.5" SAS 2.5" SAS	DDR3 DDR3 DDR3 SFF H SFF H	3 1333 MI 3 1333 MI 3 1333 MI IS (15000 HS (1000	Hz RDIMM Hz RDIMM Hz RDIMM) rpm) 0 rpm)		67Y0 67Y0 67Y0 67Y0	0014 0015 0016 0115 0116									
500GB USB P Lenovo	2.5" SAS 2.5" SAT ortable Di D® TV L15 accessorie	A SFF skette 1 15-in	HS (7200 Drive ch Analo	o rpm)) rpm) g TFT Mor m /accesso	iitor ries					• Dia	agnostic	y: F1 at s : F2 at sta oot: F12 a	tartup artup at startup			
	ternal ca		SATA SFF	disks								Softwa er EasySta er EasyMa	artup	igement To	ols	
	ization												Secu	urity		
virtuali	∠ation rea	ady, ny	Jervisor (connector e								password ator passv				
Cust select ⇒ Thin	3-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Onsite service upgrade options (in eligible locations) ⁷							for	• Bo	oot sequ oot witho erial port	ence con	trol ard, mou ol	ise, diskette t or all))		
• Or	nsite servi	ice upç	rade opt	ions (in eli						ThinkPlus Priority Support, 90-day Trial						
	 Post warranty maintenance services 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 						-7378	RoHS-compliant								
Sec fact	notos for i	mnorto	at worrant	y informatio	n											© Lenovo

Name			Proc- essor(s)	GHz (Cores	Memory DIMMs	Memory speed	Disk size		Disk bays	Disk type	RAID Int	IMM Premium	Power supply(s)	Etherne	Avail t date
RD220 3	3798-1FL 3798-1LU	1 4x9 1 4x9	1xE5520	2.26 2.53	4 8	1x2GB	1333MHz	2.5"	None	8xHot-swap 8xHot-swap 8xHot-swap	SATA/SAS	Multi*	Premium		2xGb	May 09

- These models have a 3-year limited warranty¹
 Easy to use with ThinkServer EasyStartup and EasyManage software
 These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5502 with dual-core,	2U Rack top	Front			
Implementation	4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5520 or E5540 with quad-core, 5.86GT/s QPI,1066MHz DDR3 memory controller, and 8MB cache Processor uses FC-LGA package, two LGA1366 sockets	Riser slot 1 Riser slot 2 Power supply Power supply	G G G G G G G G G G G G G G G G G G G			
Memory	2GB or 4GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring, sixteen 240-pin DIMM sockets, std memory in 1 or 2 sockets, 15 or 14 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ***Advanced ECC-enable DIMMs required ****Over eight DIMMs requires dual processors	Memory Memory Sockets Sockets	T-PCle x8 3-PCle x8 PP P P P P P P P P			
Graphics	Matrox® G200e, integrated, two VGA DB-15 (front and rear), 16MB; Maximum resolution: 1280x1024@60Hz	fan fan fan				
Disk bays Disk Controller	8 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std 16U: ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support 1FU/1LU: ServeRAID-MR10i, PCIe bus, SATA 3Gb/s, SAS 3Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support	disks optical • 2U Mechanical; rack-mour • Black color front; metal cas	lt only			
Optical Diskette Ethernet	UltraSlim Enhanced DVD±RW None (use USB port) Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card	17.5"W x 27.5"D x 3.36"H 443.6mm W x 698mm D x 85.4mm H 65 lb (29.5kg) max configuration Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Bay 1 5.25", 0.5" high, external, std optical Bay 2 2.5", 0.6" high, external, optional disk				
Chipset	Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O					
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt	(See Right) Four PCI Express 2.0 x8 slots std, convertible via optional riser card(s) to 64-bit 133MHz PCI-X Two USB 2.0, external monitor (VGA DB-15). Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) One USB connector for embedded hypervisor Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) Trusted Platform Module (TPM) 1.2 support 16U: Integrated Management Module (IMM) std, IPMI 2.0-compliant, upgradeable to IMM Premium					
Prerequisites	1FU/1LU: IMM Premium, IPMI 2.0-compliant Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	Glot in han longul, rail holgh	,, <u></u>			
Keyboard Mouse Power supply(s) Cooling	None (use USB port) None (use USB port) Two 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies Three fans std, three maximum, variable speed, hot-swap	Power-O • Setup Utility: F1 at startup • Diagnostic: F2 at startup • Network Boot: F12 at startu	n Hotkey			
Max internal ca 4.0TB ² with eigh	apacity nt 500GB SATA SFF disks		agement Tools			
Virtualization		ThinkServer EasyStartup ThinkServer EasyManage				
virtualization rea	ady, hypervisor connector embedded		curity			
selected parts	Limited Warranty¹ and labor placeable Unit (CRU) parts only (with limited onsite service for s³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) services available; see lenovo.com/thinkplus/warranty	Power-on password Administrator password Boot sequence control Boot without keyboard, mo Serial port I/O control USB port disablement (fro				
Onsite servPost warrar	rice upgrade options (in eligible locations) ⁷ hty maintenance services	ThinkPlus Priority Support, 90-day Trial				
≈ 24 hour x 7 da	ay ¹⁴ toll-free support during the warranty period¹ via 800-426-7378	RoHS-compliant				

Disk **RAID** Disk IMM Power supply(s) Ethernet Avail date Type-model Slot x Proc-Memory Memory Disk **RAID** Batterv Name bay essor(s) GHz Cores DIMMs speed size bavs Premium type Int RD220 3798-13U 4x10 1xE5506 2.13 4 1x2GB 1333MHz Multi* 2.5 None 8xHot-swap SATA/SAS4 None 2x675W 2xGb May 09 * Multi = RAID-0/1/5/6/10/50/60 support This model has a 3-year limited warranty Easy to use with ThinkServer EasyStartup and EasyManage software This small and medium business (SMB) model is part of the US TopSeller™ Program Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core, 2U Rack top Processor(s) Front 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Riser Riser 800MHz DDR3 memory controller, and 4MB cache Processor uses FC-LGA package, two LGA1366 sockets Power supply Power supply Implementation slot slot 2GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring, sixteen 240-pin DIMM sockets, Memory N Rear std memory in 1 socket, 15 sockets available** eight sockets distributed into 3-channel per processor (3-3-2) 1 - PCle x8 3 - PCle x8 PSU System automatically clocks down for processors with 800MHz or 2 - PCle x8 4 - PCle x8 1066MHz DDR3 memory controller
Advanced ECC-enable DIMMs required ____ * Over eight DIMMs requires dual processors CPU Matrox® G200e, integrated, two VGA DB-15 (front and rear), 16MB; Maximum resolution: 1280x1024@60Hz Graphics Disk bays 8 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std fan fan fan ServeRAID®--MR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1, 5, 6, 10, 50, 60 support Optional, internal/external, 3.5", USB or SATA via disk controller Disk Controller Opt Tape optical disks Tape backup Optical UltraSlim Enhanced DVD±RW · 2U Mechanical; rack-mount only Diskette None (use USB port) · Black color front; metal case Ethernet Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, 17.5"W x 27.5"D x 3.36"H TCP/IP Offload Engine(TOE), load balancing, 443.6mm W x 698mm D x 85.4mm H upgradeable to 4 int ethernet ports via optional daughter card 65 lb (29.5kg) max configuration Toolless top cover removal
Toolless disk and optical drive removal Chipset Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O Toolless adapter retention Illuminated front icons with pull-out Easy LED Diagnostics panel Riser card (See Right) Four PCI Express 2.0 x8 slots std. convertible via optional riser card(s) to 64-bit 133MHz PCI-X 5.25",0.5" high, external, std optical Two USB 2.0, external monitor (VGA DB-15)
Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), 2.5", 0.6" high, external, 2.5", 0.6" high, external, 2.5", 0.6" high, external, optional disk Front ports Bay 2 Rear ports Bay з optional disk 2.5", 0.6" high, external, 2.5", 0.6" high, external, two ethernet (RJ-45), system management (RJ-45), One USB connector for embedded hypervisor Bay 4 optional disk Internal port Bay 5 optional disk Bay 6 2.5", 0.6" high, external, Bay 6 2.5", 0.6" high, external, Bay 8 2.5", 0.6" high, external, Bay 9 2.5", 0.6" high, external, Bay 10 3.5", 1.6" high, external, Casy LED Diagnostics (pull-out operator information panel with information LED and system-error LED)
Integrated Management Module (IMM) std, IPMI 2.0-compliant, Trusted Platform Module (TPM) 1.2 support, Diagnostics optional disk optional disk Systems mgmt optional disk optional disk upgradeable to IMM Premium optional tape Monitor, keyboard, mouse, SATA/SAS disk, rack, OS Prerequisites Slot 1: full-length, full-height, PCI Express 2.0 x8 None (use USB port) Keyboard Slot 2: low-profile, PCI Express 2.0 x8 Slot 3: full-length, full-height, PCI Express 2.0 x8 None (use USB port) Power supply(s) Two 675 watts standard, two maximum, variable speed fan, Slot 4: half-length, full-height, PCI Express 2.0 x8 hot-swap, auto-sensing, redundant with two power supplies Cooling Three fans std, three maximum, variable speed, hot-swap **Accessories** Intel Xeon Quad-Core Processor E5506 67Y0005 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y0015 Power-On Hotkey 300GB2 2.5" SAS SFF HS (10000 rpm) 67Y0118 Setup Utility: F1 at startupDiagnostic: F2 at startup 500GB 2.5" SATA SFF HS (7200 rpm) 67Y0121 Other accessories at lenovo.com/accessories Network Boot: F12 at startup **Software Management Tools** Max internal capacity ThinkServer EasyStartup 4.0TB with eight 500GB SATA SFF disks ThinkServer EasyManage Virtualization Security Virtualization ready, hypervisor connector embedded Power-on password Administrator password Limited Warranty¹ Boot sequence control 3-year parts and labor Boot without keyboard, mouse, diskette Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)
ThinkPlus™ services available; see lenovo.com/thinkplus/warranty Serial port I/O control USB port disablement (front or all) Onsite service upgrade options (in eligible locations) ThinkPlus Priority Support, 90-day Trial Post warranty maintenance services
 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 RoHS-compliant

Туре-	Slot x Proc- Memory Memory Disk RAID Disk	Disk RAID IMM Power _ Avail					
Name model	bay essor(s) GHz Cores DIMMs speed size Battery bays	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
RD220 3779-1A0	J 4x13 1xE5502 1.86 2 1x1GB 1333MHz 2.5" None 12xHot-s • This model has a 3-year limited warranty ¹	swap SATA/SAS ⁴ 0/1 None 1x675W 2xGb May 09					
Processor(s)	Up to two processors, one processor standard,	2U Rack top Front					
110063301(3)	Intel® Xeon® Processor E5502 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), 800MHz DDR3 memory controller, and 4MB cache						
Implementation	Processor uses FC-LGA package, two LGA1366 sockets	Riser slot 1 Riser slot 1 Opt Psu Opt Psu Opt Psu					
Memory	1GB std, 128GB max (64GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, Advanced ECC***, Memory Mirroring, sixteen 240-pin DIMM sockets, standard memory in 1 socket, 15 sockets available****, eight sockets distributed into 3-channel per processor (3-3-2) ** System automatically clocks down for processors with 800MHz DDR3 memory controller **** Advanced ECC-enable DIMMs required **** Over eight DIMMs requires dual processors	Ser slot 1 Rear Rear PSU POWER SUPPLY OPT PSU PSU PSU PSU PSU PSU PSU PSU					
Graphics	Matrox® G200e, integrated, two VGA DB-15 (front and rear), 16MB; Maximum resolution: 1280x1024@60Hz						
Disk bays Disk Controller Optical Diskette	12 hot-swap (HS) disk bays on 2.5" Slim-Form-Factor (SFF) std ServeRAID®-BR10i, PCI Express® bus, SATA 3Gb/s, SAS 3Gb/s, RAID® 0, 1 support None (use optional USB diskette)	fan fan fan disks optical					
Ethernet	Two Gigabit Ethernet ports, Broadcom® 5709C, PCI Express bus, TCP/IP Offload Engine(TOE), load balancing, upgradeable to 4 int ethernet ports via optional daughter card	 2U Mechanical; rack-mount only Black color front; metal case 17.5"W x 27.5"D x 3.36"H 					
Chipset	Intel 5520 Chipset, Intel I/O Hub (IOH) for PCI Express slots and links to BCM5709C, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 (ICH10) for USB, PCIe links to SATA/SAS controller, LPC bus to VSC452 for limited Super I/O	443.6mm W x 698mm D x 85.4mm H 65 lb (29.5kg) max configuration Toolless top cover removal Toolless disk and optical drive removal Toolless adapter retention					
Riser card	(See Right) Four PCI Express 2.0 x8 slots std,	Illuminated front icons with pull-out Easy LED Diagnostics panel					
Front ports Rear ports	Two USB 2.0, external monitor (VGA DB-15) Two USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45), system management (RJ-45) One USB connector for embedded hypervisor Easy LED Diagnostics (pull-out operator information panel with information LED and system-error LED) Integrated Management Module (IMM) std, IPMI 2.0-compliant,						
Internal port Diagnostics Systems mgmt							
Prerequisites	Trusted Platform Module (TPM) 1.2 support, upgradeable to IMM Premium Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	Bay 8 2.5", 0.6" high, external, optional disk Bay 9 2.5", 0.6" high, external, optional disk Bay 10 2.5", 0.6" high, external, optional disk					
Keyboard Mouse Power supply(s) Cooling	None (use USB port) None (use USB port) One 675 watts standard, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies Three fans std, three maximum, variable speed, hot-swap	Bay 11 2.5", 0.6" high, external, optional disk Bay 12 2.5", 0.6" high, external, optional disk Bay 13 2.5", 0.6" high, external, optional disk Slot 1: full-length, full-height, PCI Express 2.0 x8					
Accessories	The control of the state of the	Slot 2: low-profile, PCI Express 2.0 x8 Slot 3: full-length, full-height, PCI Express 2.0 x8					
1GB PC3-1060 2GB PC3-1060 4GB PC3-1060 73GB ² 2.5" SAS	-Core Processor E5502 67Y0004 0 DDR3 1333 MHz RDIMM 67Y0014 0 DDR3 1333 MHz RDIMM 67Y0015 0 DDR3 1333 MHz RDIMM 67Y0016 6 SFF HS (15000 rpm) 67Y0115	Slot 4: half-length, full-height, PCI Express 2.0 x8					
300GB 2.5" SA 500GB 2.5" SA USB Portable D Lenovo® TV L15	S SFF HS (10000 rpm) 67Y0116 S SFF HS (10000 rpm) 67Y0118 If A SFF HS (7200 rpm) 67Y0121 iskette Drive 05K9276 51 15-inch Analog TFT Monitor es at lenovo.com/accessories	Power-On Hotkey Setup Utility: F1 at startup Diagnostic: F2 at startup Network Boot: F12 at startup					
Max internal ca 6.0TB with twelv	apacity /e 500GB SATA SFF disks	Software Management Tools ThinkServer EasyStartup ThinkServer EasyManage					
Virtualization	ady, hypervisor connector embedded	Security					
vii taanzation 16	Limited Warranty ¹	Power-on password Administrator password					
selected part	•	Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all)					
Onsite serv	vice upgrade options (in eligible locations) ⁷ nty maintenance services	ThinkPlus Priority Support, 90-day Trial					
	ay ¹⁴ toll-free support during the warranty period¹ via 800-426-7378	RoHS-compliant					
Soo footpotoe for	important warranty information	© Lenovo					

ThinkServer™ TD200, TD200x, RD210, RD220 Accessories

Partial list of accessories supported on Let TD200, TD200x, RD210, RD220	novo® ThinkServer		
ThinkServer Ready accessories are available Business Partners. Locate a Business Partne bplocator.lenovo.com			
Processors ⁵⁵		Disk Drive	
TD200: Intel® Xeon® Dual-Core Processor E5502 Intel Xeon Quad-Core Processor E5504 Intel Xeon Quad-Core Processor E5506	67Y0008 ann 10/06/09 67Y0009 ann 10/06/09 67Y0010 ann 10/06/09	All: 2.5" SAS Hot-swap (HS): 73GB ² 2.5" SAS SFF HS (15000 rpm) 146GB 2.5" SAS SFF HS (10000 rpm) 146GB 2.5" SAS SFF HS (15000 rpm)	67Y0115 ann 05/05/09 67Y0116 ann 05/05/09 67Y0117 ann 05/05/09
TD200x: Intel Xeon Quad-Core Processor E5520 Intel Xeon Quad-Core Processor E5530 Intel Xeon Quad-Core Processor E5540	67Y0011 ann 06/30/09 67Y0102 ann 06/30/09 67Y0103 ann 03/02/10	300GB 2.5" SAS SFF HS (10000 rpm) 2.5" SATA HS: 300GB 2.5" SATA SFF HS (10000 rpm)	67Y0118 ann 05/05/09 67Y0002 ann 05/05/09
RD210, RD220:		160GB 2.5" SATA SFF HS (7200 rpm) 500GB 2.5" SATA SFF HS (7200 rpm)	67Y0120 ann 09/08/09 67Y0121 ann 09/08/09
Intel Xeon Dual-Core Processor E5502 Intel Xeon Quad-Core Processor E5504 Intel Xeon Quad-Core Processor E5506 Intel Xeon Quad-Core Processor E5520	67Y0004 ann 05/05/09 67Y0007 ann 05/05/09 67Y0005 ann 05/05/09 67Y0006 ann 05/05/09	3.5" SAS HS: 146GB 3.5" SAS HS (15000 rpm)	45J6211 ann 09/30/08
Intel Xeon Quad-Core Processor E5540 55 Additional Processor must match the existin	67Y0096 ann 05/05/09	3.5" SATA HS: 160GB 3.5" SATA HS (7200 rpm) 250GB 3.5" SATA HS (7200 rpm)	45J6200 ann 09/30/08 45J6201 ann 09/30/08
Memory 1GB PC3-10600 DDR3 ECC RDIMM 2GB PC3-10600 DDR3 ECC RDIMM 4GB PC3-10600 DDR3 ECC RDIMM	67Y0014 ann 05/05/09 67Y0015 ann 05/05/09 67Y0016 ann 05/05/09	500GB 3.5" SATA HS (7200 rpm) 750GB 3.5" SATA HS (7200 rpm) 1TB 3.5" SATA HS (7200 rpm)	45J6202 ann 09/30/08 45J6203 ann 09/30/08 45J6204 ann 09/30/08
Backup		3.5" SATA Simple-swap: 160GB 3.5" SATA Simple-swap (7200 rpm)	45J6195 ann 09/30/08
All: IBM® RDX 160GB Cartridge IBM RDX 320GB Cartridge IBM RDX 500GB Cartridge	67Y0169 ann 11/10/09 67Y0170 ann 11/10/09 67Y0171 ann 11/10/09	250GB 3.5" SATA Simple-swap (7200 rpm) 500GB 3.5" SATA Simple-swap (7200 rpm) 750GB 3.5" SATA Simple-swap (7200 rpm)	45J6196 ann 09/30/08 45J6197 ann 09/30/08 45J6198 ann 09/30/08
RD210, RD220: IBM LTO Generation 3 5-Pack Media	67Y1379 ann 11/10/09	TD200: 3.5" 6Gb/s SAS HS: 300GB 3.5" SAS HS (15000 rpm)	67Y1384 ann 01/26/10
ThinkServer IBM RAID controller SAS 3Gb HBA Controller V2 ServeRAID® M1015 ServeRAID M5015 ServeRAID M5014 ServeRAID M1000 Series Adv Feature Key ServeRAID M5000 Series Battery Kit ServeRAID M5000 Series Adv Feature Key	67Y0183 ann 11/10/09 67Y1368 ann 12/08/09 67Y0184 ann 11/10/09 67Y0185 ann 11/10/09 67Y1369 ann 12/08/09 67Y0186 ann 11/10/09 67Y0188 ann 12/08/09	450GB 3.5" SAS HS (15000 rpm) 600GB 3.5" SAS HS (15000 rpm)	67Y1385 ann 01/26/10 67Y1386 ann 01/26/10
Connectivity IBM 8Gb FC Single-port HBA by QLogic® IBM 8Gb FC Dual-port HBA by QLogic IBM 8Gb FC Single-port HBA by Emulex® IBM 8Gb FC Dual-port HBA by Emulex IBM 8Gb FC Single-port HBA by Brocade® IBM 8Gb FC Dual-port HBA by Brocade	67Y0172 ann 11/10/09 67Y0173 ann 11/10/09 67Y0174 ann 11/10/09 67Y0175 ann 11/10/09 67Y0176 ann 11/10/09 67Y0177 ann 11/10/09	www.lenovo.com/support/accessories www.lenovo.com/support/thinkserveracc	
Keyboard Preferred Pro USB Keyboard	73P5220 ann 06/21/05	www.lenovo.com/support/security Other accessories at www.lenovo.com/acc	essories
Mouse Lenovo Optical Mouse (USB)	06P4069 ann 05/21/03	Accessories Guide pdf at www.lenovo.com/	accessoriesguide

ThinkServer™ TD200x, RD210, RD220 - ThinkPlus™ Services

Partial list of Lenovo® ThinkPlus Services for ThinkServer™ TD200x, RD210, RD220

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

Training classes

• The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

Online Training, Understanding Lenovo Servers	45K4080
Online Training, Understanding Systems Management	45K4081
Installation, ThinkServer Hardware Only	45K4082

ThinkPlus service upgrade options7

LOR = Lenovo Onsite Repair

TD200x with 1-year warranty	
3-year LOR 9x5 Next Business Day	45K4062
3-year LOR 9x5 4 hour response	45K4063
4-year LOR 9x5 Next Business Day	51J0731
4-year LOR 9x5 4 hour response	51J0732
5-year LOR 9x5 Next Business Day	51J0733
5-year LOR 9x5 4 hour response	51J0734

TD200x with 3-year warranty	
3-year LOR 9x5 4 hour response	45K4066
4-year LOR 9x5 Next Business Day	51J0735
4-year LOR 9x5 4 hour response	51J0736
5-year LOR 9x5 Next Business Day	51J0737
5-year LOR 9x5 4 hour response	51J0738

RD210, RD220 with 1-year warranty	
3-year LOR 9x5 Next Business Day	45K5305
3-year LOR 9x5 4 hour response	45K5306
4-year LOR 9x5 Next Business Day	51J0747
4-year LOR 9x5 4 hour response	51J0748
5-year LOR 9x5 Next Business Day	51J0749
5-year LOR 9x5 4 hour response	51J0750

5-year LOR 9x5 4 not	ur response	51J0/50
RD210, RD220 with 3	3-year warranty	
3-year LOR 9x5 4 hou	ur response	45K4076
4-year LOR 9x5 Next	Business Day	51J0751
4-year LOR 9x5 4 hou		51J0752
5-year LOR 9x5 Next	Business Day	51J0753
5-year LOR 9x5 4 hou	ur response	51J0754

ThinkPlus Priority Support

- 9x5 Next Business Day response Lenovo Onsite Repair
 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians

TD200x with 1-year warranty	
3-year Priority Support	45K4064
3-year Priority 4 Support	45K4065
TD200x with 3-year warranty	

3-year Priority Support 3-year Priority 4 Support 45K4067 45K4068

RD210, RD220 with 1-year warranty

3-year Priority Support 3-year Priority 4 Support 45K5307 45K5308

RD210. RD220 with 3-year warranty

3-year Priority Support 3-year Priority 4 Support 45K4077 45K4078

ThinkPlus Priority Support with Hard Disk Drive Retention

- 9x5 Next Business Day response Lenovo Onsite Repair
 24x7 4-hour response Lenovo Onsite Repair (for Priority 4 Support)
- 24x7 support with priority routing and advanced level technicians
 Hard Disk Drive Retention (HDDR) means customer keeps disk

HDDR = Hard Disk Drive Retention

TD200x with 1-year warranty

3-year Priority Support with HDDR	45K5445
3-year Priority 4 Support with HDDR	45K5446
TD200x with 3-year warranty	15K5117

3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR 45K5448

RD210, RD220 with 1-year warranty 3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR 45K5453 45K5454 RD210, RD220 with 3-year warranty 3-year Priority Support with HDDR 3-year Priority 4 Support with HDDR 45K5455 45K5456

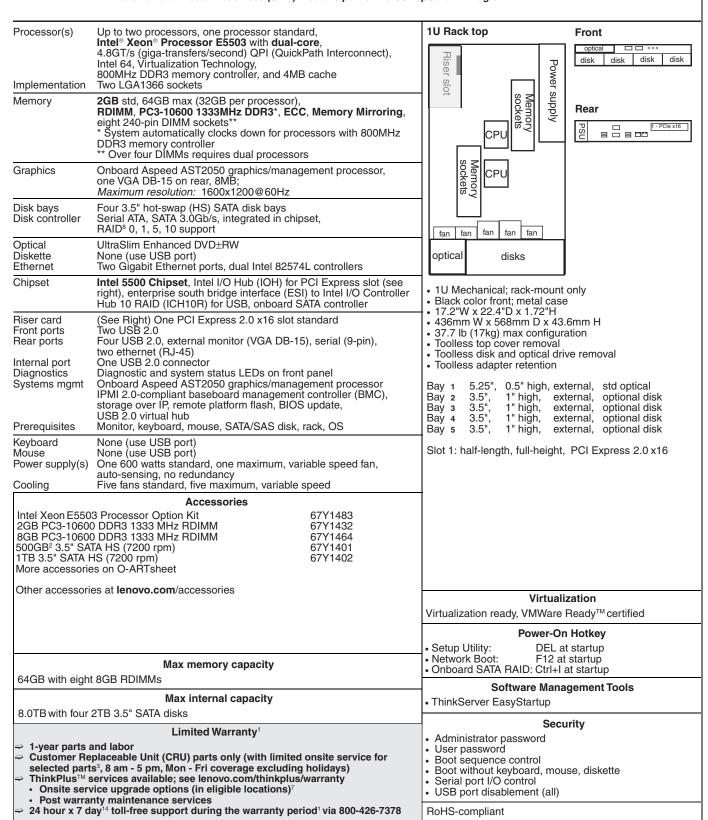
ThinkPlus Productivity

- Priority Support
 Online Training, Understanding Lenovo Servers
 One-time hardware installation

3-year ThinkPlus Productivity, TD200x (1-year)	45K4088
3-year ThinkPlus Productivity, TD200x (3-year)	45K4090
3-year ThinkPlus Productivity, RD210, RD220 (1-year)	45K5309
3-year ThinkPlus Productivity, RD210, RD220 (3-year)	45K4096

Name	Type- model	Slot x bay	Proc- essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk RAI size Batte		Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	4010-111	1 x 5	1 x F5503	2 00	2	1 x 2GB	1333MHz	3.5" Non	e 4 x Hot-swa	an SATA	DVD+RW	0/1/5/10	IPMI	2xGh [Dec 10

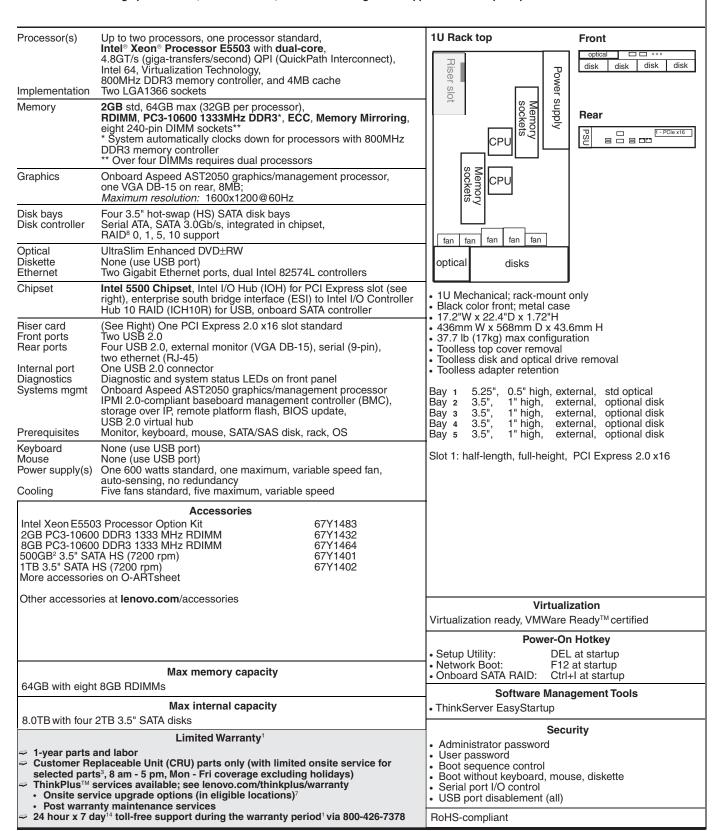
- This model has a 1-year limited warranty
- · High performance, advanced RAID, and remote management supported at value price point
- This small and medium business (SMB) model is part of the US TopSeller™ Program



Type- Name model	Slot x Proc- bay essor(s) GHz Cores DIMMs speed size Battery bay								
RD230 4011-13U	J 1x5 1xE5507 2.26	swap SATA DVD±RW 0/1/5/10 IPMI 2xGb Dec 10 swap SATA DVD±RW 0/1/5/10 KVM 2xGb Dec 10 swap SATA/SAS4 DVD±RW 0/1/5/6/10 KVM 2xGb Dec 10							
	 These models have a 3-year limited warranty¹ These small and medium business (SMB) models are part of the L 	JS TopSeller™ Program							
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5506 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5507 with quad-core, 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620 with quad-core, 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache	TU Rack top Front Optical Op							
Implementation Memory	Two LGA1366 sockets 2GB or 4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring, eight 240-pin DIMM sockets** *System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	SOCKET CPU							
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; Maximum resolution: 1600x1200@60Hz	optical disks							
Disk bays Disk controller	12U/13U: Four 3.5" hot-swap (HS) SATA disk bays 14U: Four 3.5" hot-swap (HS) SATA/SAS disk bays 12U/13U: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID® 0, 1, 5, 10 support 14U: ThinkServer 8708ELP SAS RAID Controller, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10 support 14U: Battery backed cache integrated	1U Mechanical; rack-mount only Black color front; metal case 17.2"W x 22.4"D x 1.72"H 436mm W x 568mm D x 43.6mm H 37.7 lb (17kg) max configuration Toolless top cover removal Toolless disk and optical drive removal							
Optical Diskette	UltraSlim Enhanced DVD±RW None (use USB port)	Toolless adapter retention Bay 1 5.25", 0.5" high, external, std optical Bay 2 3.5", 1" high, external, optional disk Bay 3 5" 1" high, external, optional disk							
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers								
Chipset	Intel 5500 Chipset, Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller	Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk							
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt	(See Right) One PCI Express 2.0 x16 slot standard Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) One USB 2.0 connector Diagnostic and system status LEDs on front panel Onboard Aspeed AST2050 graphics/management processor IPMI model(s): IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub KVM model(s): IPMI functions PLUS KVM supported, 24bit high quality video compression Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	Slot 1: half-length, full-height, PCI Express 2.0 x16							
Keyboard	None (use USB port)	Virtualization							
Mouse Power supply(s)	None (use USB port) One 600 watts standard, one maximum, variable speed fan,	Virtualization ready, VMWare Ready™ certified							
Cooling	auto-sensing, no redundancy Five fans standard, five maximum, variable speed	Power-On Hotkey Setup Utility: DEL at startup							
64GB with eight	Max memory capacity	Network Boot: F12 at startup Onboard SATA RAID: Ctrl+I at startup Add-on SATA/SAS RAID: Ctrl+H at startup							
3.5" SATA HS: 3.5" SAS HS:	Max internal capacity 8.0TB with four 2TB 3.5" SATA disks 2.4TB with four 600GB 3.5" SAS disks	Software Management Tools ThinkServer EasyStartup							
 ⇒ 3-year parts a ⇒ Customer Reselected parts ⇒ ThinkPlus™s • Onsite serv • Post warrar 	Limited Warranty ¹ and labor placeable Unit (CRU) parts only (with limited onsite service for s ² , 8 am - 5 pm, Mon - Fri coverage excluding holidays) ervices available; see lenovo.com/thinkplus/warranty rice upgrade options (in eligible locations) ⁷ hty maintenance services	Security Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)							
→ 24 nour x 7 da	ay ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378	RoHS-compliant							

Name	Type- model	Slot x bay	Proc- essor(s)	GHz	Cores	Memory DIMMs	Memory speed		RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	1043-11U	1x5	1 x E5503	2.00	2	1x2GB	1333MHz	3.5"	None	4 x Hot-swap	SATA	DVD±RW	0/1/5/10	IPMI	2xGb	Dec 10

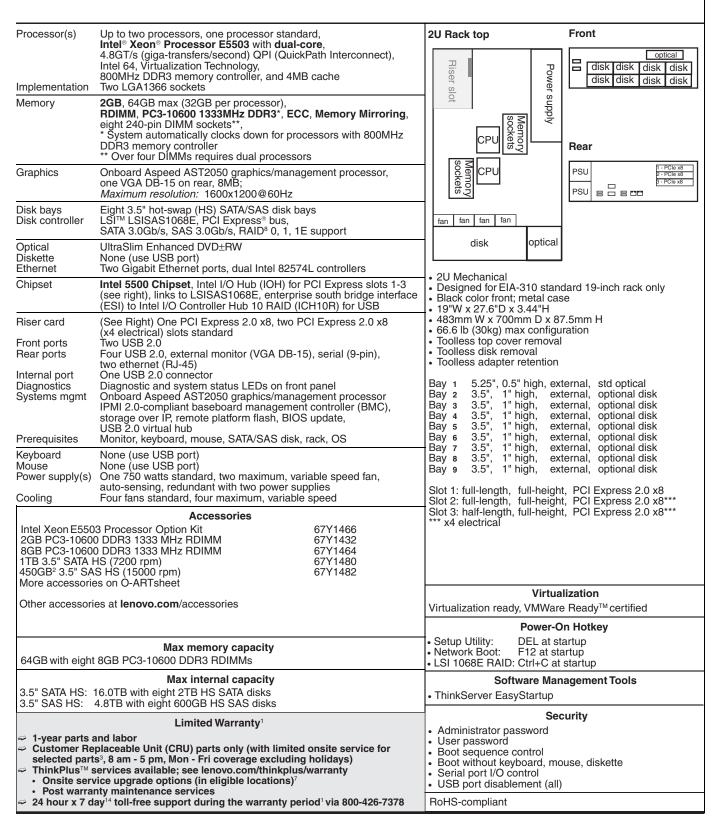
- This model has a 1-year limited warranty
- . High performance, advanced RAID, and remote management supported at value price point



	Slot x Proc- Memory Memory Disk RAID Disk	Diel. CATA DAID Custom Austin						
Name Type- model	bay essor(s) GHz Cores DIMMs speed size Battery bays	Disk SATA RAID System Avail type optical Int mgmt Ethernet date						
	1x51xE5503 2.00 2 1x2GB 1333MHz 3.5" None 4xHot-sv 1x51xE5506 2.13 4 1x4GB 1333MHz 3.5" None 4xHot-sv • These models have a 3-year limited warranty ¹ • High performance, advanced RAID, and remote management supp	wap SATA/SAS ⁴ DVD±RW 0/1/5/6/10 KVM 2xGb Dec10						
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5506 with quad-core, 4.8GT/s QPI, Intel 64, Virtualization Technology,	1U Rack top Front Optical Op						
Implementation	800MHz DDR3 memory controller, and 4MB cache Two LGA1366 sockets	Supply Rear Sockets						
Memory	2GB or 4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring, eight 240-pin DIMM sockets** * System automatically clocks down for processors with 800MHz DDR3 memory controller ** Over four DIMMs requires dual processors	CPU CPU Sockets						
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; Maximum resolution: 1600x1200@60Hz	σ ζ l fan						
Disk bays Disk controller	 11U: Four 3.5" hot-swap (HS) SATA disk bays 15U: Four 3.5" hot-swap (HS) SATA/SAS disk bays 11U: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID⁸ 0, 1, 5, 10 support 15U: ThinkServer 8708ELP SAS RAID Controller, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, PAID 0, 1, 5, 6, 10 support 	optical disks • 1U Mechanical; rack-mount only • Black color front; metal case						
Optical Diskette Ethernet	RAID 0, 1, 5, 6, 10 support UltraSlim Enhanced DVD±RW None (use USB port) Two Gigabit Ethernet ports, dual Intel 82574L controllers	 17.2"W x 22.4"D x 1.72"H 436mm W x 568mm D x 43.6mm H 37.7 lb (17kg) max configuration Toolless top cover removal 						
Chipset	Intel 5500 Chipset, Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller	Toolless disk and optical drive removal Toolless adapter retention Bay 1 5.25", 0.5" high, external, std optical						
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt	(See Right) One PCI Express 2.0 x16 slot standard Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) One USB 2.0 connector Diagnostic and system status LEDs on front panel Onboard Aspeed AST2050 graphics/management processor IPMI model(s): IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub KVM model(s): IPMI functions PLUS KVM supported, 24bit high quality video compression	Bay 1 5.25°, 0.5° nign, external, std optical Bay 2 3.5°, 1° high, external, optional disk Bay 3 3.5°, 1° high, external, optional disk Bay 4 3.5°, 1° high, external, optional disk Bay 5 3.5°, 1° high, external, optional disk Slot 1: half-length, full-height, PCI Express 2.0 x16						
Prerequisites Keyboard Mouse Power supply(s) Cooling	Monitor, keyboard, mouse, SATÁ/SAS disk, rack, OS None (use USB port) None (use USB port) One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy Five fans standard, five maximum, variable speed	_						
J. J.	Accessories	Virtualization						
2GB PC3-10600	R Processor Option Kit 67Y1483 DDR3 1333 MHz RDIMM 67Y1432 s on O-ARTsheet	Virtualization ready, VMWare Ready™ certified						
Other accessorie	es at lenovo.com/accessories	Power-On Hotkey • Setup Utility: DEL at startup						
64GB with eight	Max memory capacity 8GB RDIMMs	Network Boot: F12 at startup Onboard SATA RAID: Ctrl+I at startup Add-on SATA/SAS RAID: Ctrl+H at startup						
	Max internal capacity 8.0TB with four 2TB 3.5" SATA disks 2.4TB with four 600GB 3.5" SAS disks	Software Management Tools ThinkServer EasyStartup						
 ⇒ 3-year parts a ⇒ Customer Repselected parts ⇒ ThinkPlus™ s • Onsite serv • Post warran 	Limited Warranty ¹	Security Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) RoHS-compliant						

Name	Type- model	Slot x bay	Proc- essor(s)	GHz (Cores	Memory DIMMs	Disk size	RAID Battery	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Power supply(s) Ethernet	Avail date
BD240	1047-111	1 3x9	1 x F5503	2 00	2	1x2GB	3.5"	None	8 x Hot-swap	1068F	SATA/SAS ⁴	0/1/1F	IPMI	1x750W 2xGh	Jul 10

- This model has a 1-year limited warranty
- . High performance, scalability, and remote management supported at value price point



Type- Name model	Slot x bay	Proc-	GHz Cores	Memory DIMMs		RAID Battery)isk ays	Disk Control		Disk type	RAI		/stem	Power supply(s)	Etherne	Avail
RD240 1048-11U RD240 1048-12U RD240 1048-13U	J 3x9 1 J 3x9 1	1 x E5503 1 x E5640	2.00 2 2.66 4	1x2GB 1x4GB	3.5" 3.5"	Battery	8xHc	ot-swap		Ε	SATA/SAS ⁴ SATA/SAS SATA/SAS	0/1/ Mult Mult	1E I i* ł	PMI (VM (VM	1x750W 1x750W 2x750W	2 x Gb	Jul 10 Jul 10 Jul 10
*Multi = RAID 0/1			2.00 12	EX IGB	0.0	Dationy	OXIII	or omap	, 0, 00.	_	0, 11, 10, 10	widit			ZX70011	_ ZX GE	, our ro
Processor(s)	Intel® 4.8GT, Intel 64800MH Intel X 5.86G Virtual 1066M Intel X	Xeon® Pro/s (giga-to- 4, Virtualing DDR3 (eon Pro- T/s QPI, ization To- IHz DDR (eon Pro-	essors, one c rocessor E5 ransfers/sec ization Techr memory cor cessor E56 Intel 64, Hyp pechnology, Tu 3 memory co cessor X56	503 with ond) QPI nology, ntroller, a 10 with q er-Threa urbo Boo ontroller, 50 with s	dual (Qui nd 41 uad-uad-uad-uad-uad-uad-uad-uad-uad-uad-	I-core, ckPath I MB cach core, Technolo chnology 12MB ca re,	nterco			2U	Riser slot	Memory sockets	Power supply	Fro	disk disk disk disk		disk
Implementation	Virtual 1333N Two L0	ization Te IHz DDR GA1366 s		urbo Boo ontroller,	st Ted and	chnology 12MB ca	iche				Memory sockets	1		PS	U		le x8 le x8
Memory	eight 2 * Syste 1066N	M, PC3-1 240-pin D em autom 1Hz DDR	BGB std, 640 0600 1333M IMM sockets natically cloc 3 memory co MMs requires	Hz DDR **, ks down ontroller	3 *, E for pi	CC, Mer ocessor	nory I	/lirrorii		fa	an fan fan disk	fan	optica	PS I			
Graphics	one VC	GA DB-18	ed AST2050 5 on rear, 8M <i>lution:</i> 1600	ĬĔ;		agemen	t proce	essor,			2U Mechanio Designed for		10 eta	J	10-inch ra	ck only	
Disk bays Disk controller	Some:	SATA 3 ThinkS PCI Ex RAID 0	wap (HS) SA SISAS1068 B.0Gb/s, SAS Server 8708E cpress bus, S D, 1, 5, 6, 10, backed cac	E, PCI E: 3 3.0Gb/s LP SAS 6ATA 3.00 50, 60 s	cpres , RA RAID ab/s, uppo	se [®] bus, ID [®] 0, 1, O Control SAS 3.0	ller, '	oport		• E • 1 • 4 • 6 • 1	Black color fi 19"W x 27.6' 483mm W x 66.6 lb (30kg Toolless top Toolless disk Toolless ada	ront; m 'D x 3. 700mr g) max cover i remov	etal ca 44"H n D x 8 config remova	ase 37.5m uratio al	m H	ok offiy	
Optical Diskette Ethernet	None (use USE	nced DVD±F 3 port) nernet ports,		l 825	74L con	trollers	6		Ba	ay 2 3.5",	์ 1" hig	gh, e	xterna	al, std opti al, optiona	l disk	
Chipset	(see ri	ght), links	s to LSISAS ¹	1068E,`eı	ntérp	rise sout	th brid	ge inte		Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk							
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt	Intel 5500 Chipset, Intel I/O Hub (IOH) for PCI Express slots 1- (see right), links to LSISAS1068E, enterprise south bridge interl (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB (See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard Two USB 2.0 Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45) One USB 2.0 connector Diagnostic and system status LEDs on front panel Onboard Aspeed AST2050 graphics/management processor IPMI model(s): IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub KVM model(s): IPMI functions PLUS KVM supported, 24bit high quality video compression									Bay 7 3.5", 1" high, external, optional disk Bay 8 3.5", 1" high, external, optional disk Bay 9 3.5", 1" high, external, optional disk Slot 1: full-length, full-height, PCI Express 2.0 x8 Slot 2: full-length, full-height, PCI Express 2.0 x8*** Slot 3: half-length, full-height, PCI Express 2.0 x8*** *** x4 electrical							
Prerequisites Keyboard		r, keyboa (use USE	ard, mouse, S	SATÁ/SA	S dis	k, rack, (OS										
Mouse Power supply(s)	None (One or auto-s	use USE two 750 ensing, r		h two po	wer s	supplies		speed	fan,	Vir	rtualization r	•			ady™ certif	ied	
64GB with eight	8GB P		ax memory 0 DDR3 RDI		,					• N	Setup Utility: Ietwork Boot 068E RAID: 708ELP RA	t: F1 Cti	L at so 2 at st rl+C at rl+H at	artuṗ startı	ир		
	Max internal capacity 3.5" SATA HS: 16.0TB with eight 2TB HS SATA disks 3.5" SAS HS: 4.8TB with eight 600GB HS SAS disks											Softwa EasyS		nage	ment Tools	5	
 3-year parts a Customer Re selected part ThinkPlus™ s Onsite serv Post warra 24 hour x 7 d 	placeab s³, 8 am services vice upg nty mair	ole Unit (0 - 5 pm, N available grade opt ntenance	Mon - Fri cov e; see lenovo ions (in eligi services	nly (with erage ex o.com/thi ble locati	cludi nkpli ons)	ng holid us/warra	ays) nty			• (Administrato User passwo Boot sequen Boot without Serial port I// USB port dis	ord ice cor keybo O cont ablem	word ntrol ard, m		•		
	-	-	v information	c waiia	ıιyβ	oriou VI	a 300-	-20-13	. 0	110	or to compile						

Type- Name model	Slot x Proc		Cores		Disk RAID size Battery	Disk bays	Disk Control		Disk type	RAID Int	Systen	n Power supply(s)	Ethernet	Avail date	
RD240 1046-11U RD240 1046-12U RD240 1046-13U RD240 1046-14U *Multi = RAID 0/1	J 3x9 1xE55 J 3x9 1xE56 J 3x9 2xE56	07 2.26 20 2.40	4 4		3.5" 3.5" Battery		87081 87081	E S	ATA/SAS ⁴ ATA/SAS ATA/SAS ATA/SAS	0/1/1E Multi* Multi Multi	IPMI KVM KVM	1x750W 1x750W 2x750W 2x750W	2xGb 2xGb 2xGb	Jul 10 Jul 10 Jul 10	
Processor(s)	Up to two pro Intel® Xeon® 4.8GT/s (gig Intel 64, Virtu	Proces a-transfe ualization	sor E rs/sed Tech	5506 with cond) QI anology.	,	l, Interconnect)			ack top		Fro	nt disk disk	optica		
Implementation	Intel Xeon F 4.8GT/s QPI 800MHz DD Intel Xeon F 5.86GT/s QF Virtualization	Processon, Intel 64 R3 memo Processon PI, Intel 6 In Technol DR3 men	or E55 , Virtu ory co or E56 4, Hy ogy, T nory c	607 with lalization ontroller, 620 or Electrical per-Three furbo Bo	and 4MB cac quad-core, in Technology, and 4MB cac 5640 with qui- eading Technologr, and 12MB of	che or ad-core, ology, gv.		Disei Siot	СРИ	Memory sockets	Power supply Rea		disk d	_	
Memory	RDIMM, PC: eight 240-pir	3-10600 in DIMM solution attended to DIMM solution attended to DR3 men	13331 ocket illy clo nory o	MHz DD s***, ocks dov controlle	vn for process	rocessor), 1emory Mirro sors with 800N	•	fan	nory	ian Ont	PSU	┥ ┌	2 - PCle 3 - PCle	x8	
Graphics	Onboard Aspone VGA DB Maximum re	-15 on re	ar, 81	ИĎ; [']	cs/manageme		• 2U	Mechanic							
Disk bays Disk controller	Some: SAT	M LSISAS A 3.0Gb/ kServer Express D 0, 1, 5,	S1068 s, SA 8708 bus, 6, 10	BE, PCI S 3.0Gb ELP SAS SATA 3.0), 50, 60	Express® bus l/s, RAID® 0, 1 S RAID Conti 0Gb/s, SAS 3 support	1, 1E support oller,		DeBla19'483663TooToo	ck only						
Optical Diskette Ethernet	UltraSlim En None (use U Two Gigabit	SB port)			tel 82574L co	ontrollers		Bay Bay			n, externa	al, std optional			
Chipset	(see right), li	nks to LS	SISAS	1068E,		Express slots outh bridge inte OR) for USB		Bay 3 3.5", 1" high, external, optional disk							
Riser card Front ports Rear ports Internal port Diagnostics Systems mgmt	(x4 electrical Two USB 2.0 Four USB 2.1 two ethernet One USB 2.1 Diagnostic a Onboard Asp	l) slots st) 0, extern (RJ-45) 0 connec nd syster peed AS	andai al mo tor n sta 12050	rd nitor (V0 tus LED:) graphic	GA DB-15), so	nel ent processor		Bay Bay Bay Slot Slot Slot	7 3.5", 8 3.5", 9 3.5", 1: full-leng 2: full-leng	1" high, 1" high, 1" high, th, full-h th, full-h	externa externa externa eight, PC eight, PC	al, optional al, optional al, optional al, optional CI Express CI Express CI Express	disk disk disk 2.0 x8 2.0 x8***	** **	
Prerequisites	,	remot USB 2 s): IPMI f 24bit	e plat 2.0 vii unction high o	form flat tual hub ons PLU quality vi	torage over IF sh, BIOS upd o IS KVM supp deo compres AS disk, rack	ate, orted, sion									
Keyboard Mouse Power supply(s)	None (use U None (use U One or two 7 auto-sensing	SB port) SB port) 50 watts g, redund	stand ant w	dard, two		/ariable speed s	fan,			eady, VM ^v	er-On Ho	ady™ certifi	ed		
64GB with eight	8GB PC3-106	Max me	-		Setup Utility: DEL at startup Network Boot: F12 at startup 1068E RAID: Ctrl+C at startup 8708ELP RAID: Ctrl+H at startup										
3.5" SATA HS: 1 3.5" SAS HS: 4		• Thii	S nkServer E		•	ment Tools	;								
 ⇒ 3-year parts a ⇒ Customer Repselected parts ⇒ ThinkPlus™s • Onsite serv • Post warran 	Security • Administrator password • User password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)														
≃ 24 hour x 7 da	ay" toll-free su	ipport du	iring	ne warr	anty period1 v	/ıa 800-426-73	78	RoH	S-compliar	nt					

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC, 27709, Attn: Dept ZPYA/B600. Lenovo makes no representation or warranty regarding third party products or services.

- Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.
- ² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.
- 3 Systems with limited onsite service are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges.
- SATA/SAS: The system configuration supports the installation of either SATA or SAS disks. A configuration including both SATA and SAS disks is not supported.
- ThinkPlus Services: These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

8 RAID: Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- RAID 0 (striping) provides increased performance by writing data across multiple drives.
- RAID 1 (mirroring) provides fault tolerance by writing the data on two drives.
- RAID 5 (striping with parity) uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- RAID 6 (striped set with dual distributed parity) provides fault tolerance from two drive failures; array continues to operate with up to two failed drives. Requires four drives.
- RAID 10 (or RAID 1+0) combines
 RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance.

 Requires four drives.
- RAID 50 (or RAID 5+0) combines
 RAID 5 and RAID 0 to create block-level striping with distributed parity improving performance over RAID 5.

 Requires six drives.
- RAID 60 (or RAID 6+0) combines RAID 6 and RAID 0 to create blocklevel striping with distributed double parity improving performance over RAID 6. Requires eight drives.

- 10 Modem speeds: Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- 11 For combination drives, maximum speeds only are given in the following order: CD read, CD write, CD re-write, DVD read.
- ¹⁴ Response times may vary. May exclude some holidays. Telephone support may be subject to additional charges.
- ¹⁵ Update Connector is available at no charge to registered customers during the limited warranty period. Line charges may apply.
- 16 Embedded Security Subsystem works with optional VPN software.