ThinkStation

Product Specifications Reference Lenovo® ThinkStation® Workstations 2013 to present - withdrawn

December 2013 - Version 447



ThinkStation Family (ThinkStation E32 SFF/E32 Tower/D30/S30/C30)

lenovo.com

ThinkStation® S30 (0568) - TopSeller - withdrawn

Product Specifications Reference (PSREF)

Type- model Proce	essor	Memory (MHz/type)	Memory DIMMs		Onboard SATA/SAS -SCU	Pre-conf RAID	Hard drive(s)	Media reader		Graphics adapter(s)	1394 adptr	Global	Chassis intrusion switch	Win7 preloa
0568-46U E5-1	1603	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	Media	DVD±RW		No	No	No	Pro 64
		1333MHz UDIMM		No	SATA	No	1x500GB 3.5" SATA				No	No	No	Pro 64
		1333MHz UDIMM		No	SATA		1x500GB 3.5" SATA				No	No	No	Pro 64
		1333MHz UDIMM		No	SATA	No	1x500GB 3.5" SATA				No	No	No	Pro 64
		1333MHz UDIMM		No	SATA	No	1x500GB 3.5" SATA					No	No	Pro 6
		1333MHz UDIMM		No	SATA	No	1x500GB 3.5" SATA				No	No	No	Pro 64
		1333MHz UDIMM		No	SAS	No				1xQuadro 2000D		No	No	Pro 64
568-910 ES-	1620	1333MHz UDIMM	TX4GB	No	SAS	No	1x300GB 2.5" SAS	wedia	DVD±RW	TXQuadro 2000D	INO	No	No	Pro 64
Processor		4-channel DDR3	le DDR3 520 proc (up to 3.8 be DDR3 550 proc (up to 3.8 be DDR3 603 proc memory 609 proc	memory of essor (40 3GHz), memory of essor (60 3GHz), memory of essor (40 controller essor (40	controller (i 2/8T, 3.6GH controller (i 2/12T, 3.2G controller (i 2/4T, 1.8GH r (up to 106 2/4T, 2.4GH	up to 100 Hz, 10MB BHz, 12M Up to 160 Hz, 10MB B60MHz) Hz, 10MB	66MHz) B) , 00MHz) IB) ,		1optical 2optical 3 media 6 disk 6 disk	 Raven black c 6.9"W x 18.1"I 175mm W x 44 38.5 lb (17.5kg 31-liter Removable ha Toolless disk a Toolless disk a Toolless adapt Illuminated fro Rack shelf sup 	D x 18 60mm g) max andle c cover i and op ter ret nt icol	5.8"H (v D x 47 c config on top f remova otical di ention	vith hand 78mm H guration front al	,
mplementation	n	One LGA2011 so	,		、 ·	,								
Memory	11	UDIMM or RDIM eight 240-pin DIM	M, ECC, MM sock	DDR3, 4- ets	channel ca	apable,								
		UDIMM: up to F RDIMM: up to F								5", 1.6" high, e			optical	
Additional		Actual memory of						Bay	/ 3: 3.5	", 1" high, e>	kterna	l, for	media re disk	ader
memory		controller speed,	installed r	nemory spe	ed, and qua			Day	/ 4-6: 3.5	", 1" high, in	ternal	, ior	UISK	
disclaimers		Mixing of RDIMN								gth, full-height, P				
Graphics		Some: NVIDIA Q one Displa Some: NVIDIA Q one Displa Some: NVIDIA Q two dual-I Some: NVIDIA Q	ayPort™, ayPort™, ayPort, o ayPort, o uadro 2 ink DVI-I uadro 4	00, PCIe> one dual- 00, PCIe> ne dual-lir 000D, PC , 62W 000, PCIe	(16 adapte -link DVI-I, (16 adapte nk DVI-I, 40 le x16 ada	r, 512MI 32W r, 1GB, 0W pter, 1G er, 2GB,	В,	 Slot 2: full-lenğth, full-heiğht, PCle 3.0 x16 (x4 electrica Slot 3: full-length, full-height, PCle 3.0 x16* Slot 4: full-length, full-height, 32-bit PCl 2.3 Slot 5: half-length, full-height, PCle 2.0 x4 * Adapters >75W use auxiliary power connector(s) from PSU 						,
Media reader		Media: 25-in-1 N	ledia ca	rd reader,	internal US	SB 2.0								
Optical		Super Multi-Burn				/s Drive								
Hard drive(s)		3.5" SATA: 2.5" SATA:			7200 rpm 10000 rpm	.				SECURITY	,			
		2.5" SAS:	SAS	6.0Gb/s, 1	15000 rpm	1				o (see information				
		2.5" SSD:	Solid	State Driv	ve (SSD), S	SATA 6.0)Gb/s	• Si	de cover lo	ock (ships with two (in rear for opt p	o iden adlock	tical ke	eys)	
Onboard SATA AHCI		RAID 0, 1 support	ard drive s connec rt via Inte	es, ctors (red), el C602 ch	two SATA iipset	3.0Gb/s	connectors (orange), e pa • Se Ke	adlock proh ecurity slot ensington®	ibits side cover re (in rear for option Microsaver® cable cover removal)	emova nal			
Onboard SATA - SCU	√SAS	SAS: Three SA SATA 3.00	TA conne Gb/s, RA TA/SAS⁴ Gb/s, SA	ectors for h ID 0, 1, 5 connector S 3.0Gb/s	nard drives support via rs for hard , RAID 0, 1	, a Intel Co drives, I suppor	602 chipset t via Intel C602	 Ac Bc Bc Sc US 	oot sequen oot without erial port I/ SB 2.0 por	r password ice control keyboard, mouse O enable/disable ts enable/disable	indivi	dually		
Discrete SATA	/SAS	9240: LSI® SAS 9 SATA 6.0G	9240-8i, I	PCI Expre	ss® bus,		ograde ROM #1)		hassis İntru	ts enable/disable usion switch on se Preloaded operation	electe	d mode	el(s)	
Chipset		Intel C602 Chips	set					• W		Professional 64	Ŭ	-		
Front ports		Two USB 2.0, mi						_		aded application	15 5 (OI	nly son	ne listed)	
Rear ports		Eight USB 2.0, tw one ethernet (RJ								Recovery® rnet Security (30	dave	of virue	s definitio	ns)
EEE 1394 adp	ptr	No onboard 1394 1394 models: ad	4 ports; ditional F	ireWire P		er, 1394a	,	 Norton[®] Internet Security (30 days of virus definitions) Adobe[®] Reader[®] Adobe Flash[®] Player Microsoft[®] Office 2013 preloaded; 						10)
		High Definition (H						р	urchase pr	oduct key to activ	vate			
Audio		Internal speaker	for busin	ess audio						VD® (DVD±RW m				
Speaker		One onboard gig			82579 sted Platfo	rm Modi	ule (TPM),	Ulead® DVD MovieFactory® (DVD±RW model(s)) ISV certifications Please visit www.lenovo.com/support/ISV						
Speaker Ethernet			Int					GREENGUARD® certified						
Audio Speaker Ethernet Security chip Kevboard		TCG 1.2-complia		ard (USR	connector). 104-ke	ev. black	000				_		
Speaker Ethernet			B Keybo	`), 104-ke	ey, black							
Speaker Ethernet Security chip Keyboard		TCG 1.2-complia Preferred Pro US Optical Wheel Me 610 watts with 12	B Keybo ouse (US 20mm bo	B connec ottom-mou	tor), black nted variat	ole spee	d fan, universal,	RoH	EENGUAR IS-complia EAT™ Gold	nt				
Speaker Ethernet Security chip Keyboard Mouse Power supply		TCG 1.2-complia Preferred Pro US Optical Wheel Mo 610 watts with 12 Climate Savers®	B Keybo ouse (US 20mm bo Compu	B connec ottom-mou i ting Gold	tor), black nted variat I, 80 PLUS	ole spee [®] Gold (d fan, universal, qualified	RoH EPE	IS-complia EAT™ Gold	nt I rating				
Speaker Sthernet Security chip Keyboard Nouse	nty	TCG 1.2-complia Preferred Pro US Optical Wheel Me 610 watts with 12	B Keybo ouse (US 20mm bo Compu	B connec ottom-mou i ting Gold	tor), black nted variat I, 80 PLUS	ole spee [®] Gold (d fan, universal, qualified	RoH EPE Sup	IS-complia EAT™ Golc ports ThinI	nt	-	3		

See footnotes for important warranty information US model(s) announced April 3, 2012 US model(s) withdrawn effective December 3, 2013

ThinkStation® S30 (0569) - withdrawn

Type- model Pr	ocessor	Memory (MHz/type)	Memory DIMMs		Onboard SATA/SAS -SCU	Pre-conf RAID	Hard drive(s)	Media reader	SATA optical	Graphics adapter(s)	1394 adptr	Global	Chassis intrusion switch	Win7 preload
0569-56U E	5-1603	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 2000D	No	No	No	Pro 64
		1333MHz UDIMM		No	SATA	No	1x500GB 3.5" SATA				No	No	No	Pro 64
		1333MHz UDIMM		No	SATA		1x500GB 3.5" SATA					No	No	Pro 64
		1333MHz UDIMM		No	SATA SAS		1x500GB 3.5" SATA				No	No	No	Pro 64
		1333MHz UDIMM 1333MHz UDIMM		No No	SAS		1x300GB 2.5" SAS 1x300GB 2.5" SAS			1xQuadro 2000D 1xQuadro 4000	No No	No No	No No	Pro 64 Pro 64
Processor		Intel® Xeon® E5- 4-channel capab Intel Xeon E5-16 Turbo Boost 2.0 (4-channel capab Intel Xeon E5-16 Turbo Boost 2.0 (4-channel DDR3 Intel Xeon E5-26 4-channel capab	le DDR3 550 proc (up to 3.8 le DDR3 560 proc (up to 3.9 memory 509 proc	memory 6 essor (60 BGHz), memory 6 essor (60 9GHz), controller essor (40	controller (controller (controller (controller 3.30 (up to 160 (4T, 2.4GH	up to 100 àHz, 12N àHz, 160 àHz, 15N DOMHz) Hz, 10ME	66MHz) 1B), 00MHz) 1B), 3, 6.4 GT/s QPI x2)	, [=	1 optical 2 optical 3 media 6 disk 5 disk 6 disk	 Raven black c 6.9"W x 18.1"I 175mm W x 4 38.5 lb (17.5kg 31-liter Removable ha Toolless side c Toolless disk a Toolless daap 	D x 18 60mm g) max andle c cover i and op ter rete	8.8"H (w D x 47 c config on top f remova otical dr ention	vith handl '8mm H juration ront I	,
Implementat	tion	One LGA2011 so	ocket, su	pports up	to one pro	cessor				 Illuminated fro Rack shelf sug 		15		
Memory Additional		UDIMM or RDIM eight 240-pin DIM UDIMM: up to F RDIMM: up to F • Actual memory of	M, ECC, MM sock PC3-106 PC3-128	DDR3, 4- ets 00 1333M 00 1600M speed depe	channel ca Hz, 64GB Hz, 128GE nds on proc	apable, max (8x8 3 max (8 <i>essor me</i> r	x16ĠB) mory	Bay	/ 1-2: 5.2	5", 1.6" high, e		l. for	optical	
memory disclaimers Graphics		controller speed, • Mixing of RDIMM	1 and UDI	MM is not s	upported		es sheet O-FOR)	Bay		", 1" high, ex	kterna ternal	l, for	media re disk	ader
		Some: NVIDIA Q one Displa Some: NVIDIA Q two dual-I Some: NVIDIA Q two Displa	ayPort [™] uadro 2 ink DVI-I uadro 4 ayPort, o	00, PCIe) , one dual- 000D, PC , 62W 000, PCIe ne dual-lir	(16 àdapte link DVI-I, le x16 ada x16 adapt k DVI-I, or	er, 512MB 32W pter, 1Gl ter, 2GB, ne stereo	3, ´ B,	Slo Slo Slo Slo	t 2: full-len t 3: full-len t 4: full-len t 5: half-ler <i>Adapters</i> >	gth, full-height, Pu gth, full-height, P gth, full-height, Pu gth, full-height, 32 ngth, full-height, F >75W use auxiliar	Cle 3. Cle 3. 2-bit P PCle 2	0 x16 0 x16* CI 2.3 .0 x4	(x4 electr	
Media reade Optical Hard drive(s		Media: 25-in-1 M Super Multi-Burn 3.5" SATA: 2.5" SATA: 2.5" SAS: 2.5" SSD:	er DL D SATA SATA SAS	VD±RW S 6.0Gb/s, 6.0Gb/s, 6.0Gb/s,		/s Drive n)Gb/s		from PSU					
Onboard SA AHCI	ATA -	Four SATA Adva for opticals and h two SATA 6.0Gb/ RAID 0, 1 support	ard drive s connec	es, ctors (red),	two SATA	```) connectors connectors (orange	1000		SECURITY o (see information ock (ships with two	on le		vs)	
Onboard SA - SCU	TA/SAS	SAS: Three SA SATA 3.00	TA conne Gb/s, RA TA/SAS⁴ Gb/s, SA	ectors for I ID 0, 1, 5 connector S 3.0Gb/s	nard drives support via rs for hard , RAID 0,	s, a Intel Ce drives, 1 suppor	nnectors (blue) 602 chipset t via Intel C602 grade ROM #1)	pa • Se Ke pr • Po • Ao	adlock proh ecurity slot ensington® ohibits side ower-on pa dministrato	r password	emova nal		. ,	
Discrete SA adapter	TA/SAS	<i>9240:</i> LSI [®] SAS 9 SATA 6.0G	ib/s, SÁS			, 5 supp	ort	• Bo		ice control keyboard, mouse O enable/disable	e, disk	ette		
Chipset		Intel C602 Chips						• U\$	SB 2.0 por	ts enable/disable	indivi	dually		
Front ports		Two USB 2.0, mi								ts enable/disable usion switch on se				
Rear ports IEEE 1394 a	adptr	No onboard 1394 1394 models: ad	-45), thre 4 ports; ditional F	ee analog FireWire P	audio port	s (line-in er, 1394a	, line-out, mic-in)		/indows® 7	Preloaded operative Professional 64	ating	systen	1 ²⁰	
Audio Speaker Ethernet Security chij	р	40 High Definition (H Internal speaker One onboard gig STMicroelectroni TCG 1.2-complia	HD) Audi for busin abit ethe cs ST19	o, Realtek less audio ernet, Intel	82579	codec	ule (TPM),	• N • A • A	escue and orton [®] Inte dobe [®] Rea dobe Flash icrosoft [®] C		days ded;		,	ns)
Keyboard Mouse		Preferred Pro US Optical Wheel Me	B Keybo buse (US	SB connec	tor), black		-	• Ċ	orel® WinD	VD [®] (DVD±RW m MovieFactory [®] (I	nodel(del(s))	
Power suppl	-	610 watts with 12 Climate Savers	Compu	ting Gold	l, 80 PLUS	[®] Gold o	qualified	Plea	ase visit wy	ISV certifie ww.lenovo.com/su				
Limited War Intel AMT	ranty	3-year parts and Supports Intel Ac					IS sheet	RoH EPE	IS-complia AT™ Gold	1 rating				
								Sup	ports Thinl	kVantage® techno	logies	6		
								Mor	e compatit	ole accessories, p	lease	see O-	FOR she	et

ThinkStation® S30 (0606) - GMP - withdrawn

Product Specifications Reference (PSREF)

				Discrete	Onboard							Chassis	
Туре-		Memory	Memory	SATA/SAS	SATA/SAS	Pre-conf		Media	SATA	Graphics	1394	intrusion	Win7
model	Processor	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	adapter(s)	adptr Global	switch	preload
0606-11U	E5-1620	1600MHz RDIMM	2x2GB	No	SATA		1x2TB 3.5" SATA	Media	DVD±RW	1xQuadro 2000	Global	No	Pro 64
0606-12U	E5-1650	1600MHz RDIMM	2x2GB	No	SATA		1x2TB 3.5" SATA	Media	DVD±RW	1xQuadro 2000	Global	No	Pro 64
0606-13U	E5-1650	1600MHz RDIMM	2x4GB	No	SATA		1x2TB 3.5" SATA	Media	DVD±RW	1xQuadro 2000	Global	No	Pro 64
0606-14U	E5-2620	1333MHz UDIMM	1x4GB	No	SATA		1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 600	Global	No	Pro 64
0606-15U	E5-2620	1333MHz UDIMM	1x4GB	No	SAS		1x300GB 2.5" SAS	Media	DVD±RW	1xQuadro 600	Global	No	Pro 64
0606-16U	E5-1620	1333MHz UDIMM	4x2GB	No	SATA		1x1TB 3.5" SATA	Media	DVD±RW	1xQuadro 2000	Global	No	Pro 64
0606-17U	E5-1620	1333MHz UDIMM	2x4GB	No	SATA	1	2x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 400	Global	No	Pro 64
0606-18U	E5-1620	1333MHz UDIMM	3x4GB	No	SATA	1	2x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 600	1394 Global	No	Pro 64

• Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

		Tower
Processor	Intel [®] Xeon [®] E5-1620 processor (4C/8T, 3.6GHz, 10MB), Turbo Boost 2.0 (up to 3.8GHz), 4-channel capable DDR3 memory controller (up to 1600MHz) Intel Xeon E5-1650 processor (6C/12T, 3.2GHz, 12MB), Turbo Boost 2.0 (up to 3.8GHz), 4-channel capable DDR3 memory controller (up to 1600MHz) Intel Xeon E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel capable DDR3 memory controller (up to 1333MHz)	 Raven black color; metal case 6.9"W x 18.1"D x 18.8"H (with handle) 175mm W x 460mm D x 478mm H 38.5 lb (17.5kg) max configuration 31-liter Removable handle on top front Toolless disk and optical drive removal Toolless disk and optical drive removal
Implementation	One LGA2011 socket, supports up to one processor	G disk Illuminated front icons
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 64GB max (8x8GB) RDIMM: up to PC3-12800 1600MHz, 128GB max (8x16GB)	Rack shelf support
Additional memory disclaimers	 Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of RDIMM and UDIMM is not supported 	Bay 1-2: 5.25", 1.6" high, external, for optical Bay 3: 3.5", 1" high, external, for media reader
Graphics	Supports up to NVIDIA® Quadro® 5000 (see accessories sheet O-FOR) Some: NVIDIA Quadro 400, PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000, PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W	Bay 4-6: 3.5", 1" high, internal, for disk Slot 1: full-length, full-height, PCle 3.0 x16* (near CPU) Slot 2: full-length, full-height, PCle 3.0 x16 (x4 electrical) Slot 3: full-length, full-height, PCle 3.0 x16* Slot 4: full-length, full-height, 32-bit PCl 2.3 Slot 5: half-length, full-height, PCle 2.0 x4
Media reader Optical Hard drive(s)	Media: 25-in-1 Media card reader, internal USB 2.0 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SATA 6.0Gb/s, 15000 rpm 2.5" SATA 6.0Gb/s, 15000 rpm	Adapters >75W use auxiliary power connector(s) from PSU SECURITY Security chip (see information on left)
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1 support via Intel C602 chipset	 Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional
Onboard SATA/SAS - SCU	Three SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATA: Three SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5 support via Intel C602 chipset SAS: Three SATA/SAS ⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support via Intel C602 chipset and SAS HDD Enablement Module (Upgrade ROM #1)	Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O enable/disable
Discrete SATA/SAS adapter	9240: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	 USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s)
Chipset	Intel C602 Chipset	Preloaded operating system ²⁰
Front ports Rear ports IEEE 1394 adptr	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) <i>16U:</i> PS/2 keyboard and mouse connectors via PS/2 rear I/O cable No onboard 1394 ports; <i>1394 models:</i> additional FireWire PCIe adapter, 1394a-2000,	 Windows® 7 Professional 64 Preloaded applications⁵ (only some listed) Rescue and Recovery[®] Norton[®] Internet Security (30 days of virus definitions) Adobe[®] Reader[®] Adobe Flash[®] Player
Audio Speaker Ethernet	400Mbps, two 6-pin ports on rear High Definition (HD) Audio, Realtek® ALC662 codec Internal speaker for business audio One onboard gigabit ethernet, Intel 82579	 Microsoft[®] Office 2013 preloaded; purchase product key to activate Corel[®] WinDVD[®] (DVD±RW model(s)) Ulead[®] DVD MovieFactory[®] (DVD±RW model(s))
Security chip	STMicroelectronics ST19WP18 Trusted Platform Module (TPM), TCG 1.2-compliant	ISV certifications Please visit www.lenovo.com/support/ISV
Keyboard Mouse Power supply	Preferred Pro USB Keyboard (USB connector), 104-key, black Optical Wheel Mouse (USB connector), black 610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers [®] Computing Gold , 80 PLUS [®] Gold qualified	GREENGUARD [®] certified RoHS-compliant EPEAT™ Gold rating
Limited Warranty	3-year parts and labor, more Lenovo® services see S-TS sheet	Supports ThinkVantage [®] technologies
Intel AMT	Supports Intel Active Management Technology 7	

See footnotes for important warranty information US model(s) announced April 3, 2012

US model(s) attributiced April 3, 2012 US model(s) withdrawn effective December 3, 2013

ThinkStation® C30 (1097) - TopSeller - withdrawn

Type- model	Processor(s)	Memory (MHz/type)	Memory DIMMs		Onboard SATA/SAS F -SCU	Pre-conf RAID		Media reader	SATA optical	Graphics adapter(s)	1394 adptr	Global	Chassis intrusion switch	Win7 preload
1097-29U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD ±RW	1xNVS 300	No	No	Switch	Pro 64
1097-31U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 400	No	No	Switch	Pro 64
1097-32U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 600	No	No	Switch	Pro 64
1097-36U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 2000D	No	No	Switch	Pro 64

Processor	Intel® Xeon® E5-2603 processor (4C/4T, 1.8GHz, 10MB,	Tower
	6.4 GT/s QPI x2) , 4-channel DDR3 memory controller (up to 1066MHz)	Rack-mountable to 3U Raven black color; metal case 5.1"W x 17.5"D x 16.8"H
Implementation	Two LGA2011 sockets, supports up to two processors	• Raven black color; metal case
Memory Additional memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 64GB max (8x8GB) RDIMM: up to PC3-12800 1600MHz, 128GB max (8x16GB) • Actual memory operating speed depends on processor memory	 S.I W X IT.S D X 10.8 H 130mm W x 444mm D x 427mm H (without rubber feet) 40.7 lb (18.5kg) max configuration 24-liter Toolless side cover removal
disclaimers	controller speed, installed memory speed, and quantity of memory DIMMs • Over four DIMMs requires dual processors • Mixing of RDIMM and UDIMM is not supported	Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support or optional rail kit
Graphics	Supports up to two NVIDIA® Quadro® 5000, NVIDIA SLI® Technology support (see accessory sheet O-ALI) Some: NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB, DMS59 to dual single-link DVI-I, 17.5W Some: NVIDIA Quadro 400, PCIe x16 adapter, 512MB,	Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for disk Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec)
	one DisplayPort [™] , one dual-link DVI-I, 32W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000D, PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W	Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3
Media reader Optical Hard drive(s)	None Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s	* Adapters >75W use auxiliary power connector(s) from PSU
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5 support via Intel C602 Chipset	SECURITY
Onboard SATA/SAS - SCU	Three SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATA: Three SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5 support via Intel C602 Chipset SAS: Three SATA/SAS ⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #1)	 Security chip (see information on left) Side cover lock (ships with two identical keys) 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
Discrete SATA/SAS adapter	9240: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	Administrator password Boot sequence control
Chipset	Intel C602 Chipset	Boot without keyboard, mouse, diskette Serial port I/O enable/disable
Front ports Rear ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), one ethernet (RJ- 45), three analog audio ports (line-in, line-out, mic-in)	USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s)
IEEE 1394 adptr	No onboard 1394 ports; <i>1394 models:</i> additional FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear	Preloaded operating system ²⁰ Windows [®] 7 Professional 64
Audio Speaker Ethernet	High Definition (HD) Audio, Realtek® ALC662 codec Internal speaker for business audio One onboard gigabit ethernet, Intel 82579	Preloaded applications ⁵ (only some listed) • Rescue and Recovery [®] • Norton [®] Internet Security (30 days of virus definitions) • Adobe [®] Reader [®]
Security chip	Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	Adobe Flash® Player
Keyboard Mouse	Preferred Pro USB Keyboard (USB connector), 104-key, black Optical Wheel Mouse (USB connector), black	Microsoft® Office 2013 preloaded; purchase product key to activate
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers [®] Computing Gold, 80 PLUS [®] Gold qualified	 purchase product key to activate Corel[®] WinDVD[®] (DVD±RW model(s)) Ulead[®] DVD MovieFactory[®] (DVD±RW model(s))
Limited Warranty	3-year parts and labor; more Lenovo® services see on S-TS sheet	ISV certifications
Intel AMT	Supports Intel Active Management Technology 7	Please visit www.lenovo.com/support/ISV
		GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
		Supports ThinkVantage® technologies
		More compatible accessories, please see O-ALI sheet

ThinkStation® C30 (1097) - TopSeller - II - withdrawn

Туре-		Memory	Memory		Onboard SATA/SAS	Pre-conf		Media	SATA	Graphics	1394		Chassis intrusion	Win7
model	Processor(s)	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	adapter(s)	adptr	Global	switch	preload
1097-37U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW 1	xQuadro 600	No	No	Switch	Pro 64
1097-38U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW 1	xQuadro 2000D	No	No	Switch	Pro 64
1097-39U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SAS	No	1x300GB 2.5" SAS	No	DVD±RW		No	No	Switch	Pro 64

 Drococcr		Tower
Processor	Intel® Xeon® E5-2609 processor (4C/4T, 2.4GHz, 10MB, 6.4 GT/s QPI x2), 4-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)	Rack-mountable to 3U Raven black color; metal case 5.1"W x 17.5"D x 16.8"H 130mm W x 444mm D x 427mm H
Implementation	Two LGA2011 sockets, supports up to two processors	(without rubber feet)
Memory Additional memory disclaimers	 UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 64GB max (8x8GB) RDIMM: up to PC3-12800 1600MHz, 128GB max (8x16GB) Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over four DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported 	 40.7 lb (18.5kg) max configuration 24-liter Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support or optional rail kit Bay 1 5.25", 1.6" high, external, for optical
Graphics	Supports up to two NVIDIA [®] Quadro [®] 5000, NVIDIA SLI [®] Technology support (see accessory sheet O-ALI) <i>Some:</i> NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort [™] , one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000D, PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W	Bay 2-4 3.5", 1" high, internal, for disk Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16*
Media reader Optical Hard drive(s)	None Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s	Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5 support via Intel C602 Chipset	
Onboard SATA/SAS - SCU	Three SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATA: Three SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5 support via Intel C602 Chipset SAS: Three SATA/SAS ⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #1)	SECURITY Security chip (see information on left) Side cover lock (ships with two identical keys) 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)
Discrete SATA/SAS adapter	9240: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	 Power-on password Administrator password Boot sequence control
Chipset	Intel C602 Chipset	Boot without keyboard, mouse, diskette
Front ports Rear ports IEEE 1394 adptr	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), one ethernet (RJ- 45), three analog audio ports (line-in, line-out, mic-in) No onboard 1394 ports;	 Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s)
Audio Speaker Ethernet Security chip	1394 models: additional FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear High Definition (HD) Audio, Realtek® ALC662 codec Internal speaker for business audio One onboard gigabit ethernet, Intel 82579 Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	Preloaded operating system ²⁰ • Windows® 7 Professional 64 Preloaded applications ⁵ (only some listed) • Rescue and Recovery® • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader®
Keyboard Mouse Power supply	Preferred Pro USB Keyboard (USB connector), 104-key, black Optical Wheel Mouse (USB connector), black 800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers [®] Computing Gold , 80 PLUS [®] Gold qualified	 Adobe Flash® Player Microsoft® Office 2013 preloaded; purchase product key to activate Corel® WinDVD® (DVD±RW model(s)) Ulead® DVD MovieFactory® (DVD±RW model(s))
Limited Warranty	3-year parts and labor; more Lenovo® services see on S-TS sheet	ISV certifications
Intel AMT	Supports Intel Active Management Technology 7	Please visit www.lenovo.com/support/ISV GREENGUARD® certified RoHS-compliant EPEAT [™] Gold rating Supports ThinkVantage [®] technologies
		More compatible accessories, please see O-ALI sheet

ThinkStation® C30 (1095) - withdrawn

Туре-		Memory	Memory	Discrete SATA/SAS	Onboard SATA/SAS	Pre-conf		Media	SATA	Graphics and GPU	1394		Chassis intrusion	Win7
model	Processor(s)	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	Computing	adptr	Global	switch	preload
1095-49U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xNVS 300	No	No	Switch	Pro 64
1095-51U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 400	No	No	Switch	Pro 64
1095-52U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 600	No	No	Switch	Pro 64

Processor	Intel [®] Xeon [®] E5-2609 processor (4C/4T, 2.4GHz, 10MB,	Tower
	6.4 GT/s QPI x2), 4-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz),	Rack-mountable to 3U Raven black color; metal case 5.1"W x 17.5"D x 16.8"H
	4-channel DDR3 memory controller (up to 1333MHz)]• 130mm W x 444mm D x 427mm H
Implementation	Two LGA2011 sockets, supports up to two processors	(without rubber feet) • 40.7 lb (18.5kg) max configuration
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 64GB max (8x8GB) RDIMM: up to PC3-12800 1600MHz, 128GB max (8x16GB)	24-liter Toolless side cover removal Toolless disk and optical drive removal Toolless datar rate for a constant of the second
Additional memory disclaimers	 Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over four DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported 	Illuminated front icons Rack shelf support or optional rail kit Bay 1 5.25", 1.6" high, external, for optical
Graphics	Supports up to two NVIDIA [®] Quadro [®] 5000, NVIDIA SLI [®] Technology support (see accessory sheet O-ALI) Some: NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB, DMS59 to dual single-link DVI-I, 17.5W Some: NVIDIA Quadro 400, PCIe x16 adapter, 512MB, one DisplayPort [™] , one dual-link DVI-I, 32W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W	Bay 2-4 3.5", 1" high, internal, for disk Slot 1: half-length, full-height, PCle 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCle 3.0 x16* Slot 3: full-length, full-height, 32-bit PCl 2.3 Slot 4: full-length, full-height, PCle 3.0 x16* Slot 5: full-length, full-height, PCle 2.0 x4 Slot 6: half-length, full-height, 32-bit PCl 2.3
Media reader	None	* Adapters >75W use auxiliary power connector(s)
Optical Hard drive(s)	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s	from PSU
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5 support via Intel C602 Chipset	
- SCU	Three SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATA: Three SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5 support via Intel C602 Chipset SAS: Three SATA/SAS ⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #1)	SECURITY Security chip (see information on left) Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
Discrete SATA/SAS adapter	9240: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	 Security slot (in rear for optional Kensington[®] Microsaver[®] cable; prohibits side cover removal)
Chipset	Intel C602 Chipset	Power-on password
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)	Administrator password
Rear ports IEEE 1394 adptr	Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), one ethernet (RJ- 45), three analog audio ports (line-in, line-out, mic-in) No onboard 1394 ports; <i>1394 models:</i> additional FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear	 Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s)
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	Preloaded operating system ²⁰
Speaker Ethernet	One onboard gigabit ethernet, Intel 82579	Windows [®] 7 Professional 64
Security chip	Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	Preloaded applications ⁵ (only some listed)
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	• Rescue and Recovery®
Mouse	Optical Wheel Mouse (USB connector), black	Norton [®] Internet Security (30 days of virus definitions) Adobe [®] Reader [®]
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers [®] Computing Gold, 80 PLUS [®] Gold qualified	Adobe Flash [®] Player
Limited Warranty	3-year parts and labor; more Lenovo [®] services see on S-TS sheet	 Microsoft[®] Office 2013 preloaded; purchase product key to activate
Intel AMT	Supports Intel Active Management Technology 7	Corel® WinDVD® (DVD±RW model(s)) Ulead® DVD MovieFactory® (DVD±RW model(s))
		ISV certifications Please visit www.lenovo.com/support/ISV
		GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
		Supports ThinkVantage® technologies

ThinkStation® C30 (1095) - II - withdrawn

Type-		Memory	Memory	Discrete SATA/SAS	Onboard SATA/SAS	Pre-conf		Media	SATA	Graphics and GPU	1394		Chassis intrusion	
model	Processor(s)	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	Computing	adptr	Global	switch	preload
1095-53U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 2000D	No	Global	Switch	Pro 64
1095-54U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 4000	No		Switch	Pro 64
1095-57U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 4000	No		Switch	Pro 64
1095-59U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SAS	No	1x300GB 2.5" SAS	No	DVD±RW	1xQuadro 2000D	No		Switch	Pro 64
1095-61U	1xE5-2630	1333MHz UDIMM	1x4GB	No	SATA	No	1x500GB 3.5" SATA	No	DVD±RW	1xQuadro 2000D	No		Switch	Pro 64
1095-62U	1xE5-2630	1333MHz UDIMM	2x4GB	No	SAS	No	1x300GB 2.5" SAS	No	DVD±RW	1xQuadro 4000	No	Global	Switch	Pro 64

Processor	Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2630 processor (6C/12T, 2.3GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1333MHz)	Tower • Rack-mountable to 3U • Raven black color; metal case • 5.1"W x 17.5"D x 16.8"H • 130mm W x 444mm D x 427mm H (without rubber feet)
Implementation	Two LGA2011 sockets, supports up to two processors	• 40.7 lb (18.5kg) max configuration
Memory Additional memory disclaimers	 UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 64GB max (8x8GB) RDIMM: up to PC3-12800 1600MHz, 128GB max (8x16GB) Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over four DIMMs requires dual processors 	 24-liter Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support or optional rail kit
	Mixing of RDIMM and UDIMM is not supported	Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for disk
Graphics	Supports up to two NVIDIA [®] Quadro [®] 5000, NVIDIA SLI [®] Technology support (see accessory sheet O-ALI) Some: NVIDIA Quadro 2000D, PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W Some: NVIDIA Quadro 4000, PCIe x16 adapter, 2GB, two DisplayPort [™] , one dual-link DVI-I, one stereo, 142W	Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, 9CIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3
Media reader Optical Hard drive(s)	None Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s	* Adapters >75W use auxiliary power connector(s) from PSU
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5 support via Intel C602 Chipset	SECURITY • Security chip (see information on left) • Side cover lock (ships with two identical keys)
Onboard SATA/SAS - SCU	Three SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATA: Three SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5 support via Intel C602 Chipset SAS: Three SATA/SAS ⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #1)	 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 Administrator password Boot sequence control
Discrete SATA/SAS adapter	9240: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	 Boot without keyboard, mouse, diskette Serial port I/O enable/disable USB 2.0 ports enable/disable individually
Chipset	Intel C602 Chipset	USB 3.0 ports enable/disable concurrently
Front ports Rear ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), one ethernet (RJ- 45), three analog audio ports (line-in, line-out, mic-in)	Chassis intrusion switch on selected model(s) Preloaded operating system ²⁰ Windows [®] 7 Professional 64
IEEE 1394 adptr	No onboard 1394 ports; 1394 models: additional FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear	Preloaded applications ⁵ (only some listed) • Rescue and Recovery [®]
Audio Speaker Ethernet Security chip	High Definition (HD) Audio, Realtek® ALC662 codec Internal speaker for business audio One onboard gigabit ethernet, Intel 82579 Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	 Norton® Internet Security (30 days of virus definitions) Adobe® Reader® Adobe Flash® Player Microsoft® Office 2013 preloaded; purchase product key to activate
Keyboard Mouse Power supply	Preferred Pro USB Keyboard (USB connector), 104-key, black Optical Wheel Mouse (USB connector), black 800 watts with 80mm side-mounted variable speed fan, universal,	Corel® WinDVD® (DVD±RW model(s)) Ulead® DVD MovieFactory® (DVD±RW model(s)) ISV certifications
	Climate Savers [®] Computing Gold, 80 PLUS [®] Gold qualified	Please visit www.lenovo.com/support/ISV
Limited Warranty	3-year parts and labor; more Lenovo® services see on S-TS sheet	GREENGUARD® certified
Intel AMT	Supports Intel Active Management Technology 7	RoHS-compliant EPEAT™ Gold rating
		Supports ThinkVantage® technologies
		More compatible accessories, please see O-ALI sheet

ThinkStation® D30 (4229) - TopSeller - withdrawn

Туре-		Memory	Memory		Onboard SATA/SAS	Pre-conf		Media	SATA	Graphics and GPU	1394		Chassis intrusion	
model	Processor(s)	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	Computing	adptr	Global	switch	preload
4229-32U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 400	1394	No	Switch	Pro 64
4229-33U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 600	1394	No	Switch	Pro 64
4229-34U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 600	1394	No	Switch	Pro 64

Draaaaar		Tower				
Processor	Intel® Xeon® E5-2603 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x2), 4-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2609 processor (4C/4T, 2.4GHz, 10MB, 6.4 GT/s QPI x2), 4-channel DDR3 memory controller (up to 1066MHz)	• Raven black color; metal case • 8.3"W x 23.7"D x 19.1"H (with handle) • 210mm W x 602mm D x 485mm H				
Implementation	Two LGA2011 sockets, supports up to two processors	1 optical • 60.6 lb (27.5kg) max configuration				
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 128GB max (16x8GB) RDIMM: up to PC3-12800 1600MHz, 256GB max (16x16GB)	2 optical 3 optical 4 media Toolless disk and optical drive removal Toolless dapter retention				
Additional memory disclaimers	 Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over eight DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported Maximum memory capacity is also limited by operating system (e.g. Windows 7 Professional 64 supports up to 192GB) 	 Illuminated front icons Back shelf support or optional rail kit Rack shelf support or optional rail kit 				
Graphics	Supports up to two NVIDIA® Quadro® 5000, NVIDIA SLI® Technology support (see accessory sheet O-HOL) Some: NVIDIA Quadro 400, PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W	 Bay 1-3: 5.25", 1.6" high, external, for optical Bay 4: 3.5", 1" high, external, for media reader Bay 5-9: 3.5", 1" high, internal, for disk* * Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed. 				
Media reader Optical Hard drive(s)	Media:25-in-1Media card reader, internal USB 2.0Super Multi-Burner DL DVD \pm RW SATA 1.5Gb/s Drive $3.5"$ SATA:SATA 6.0Gb/s, 7200 rpm $2.5"$ SATA:SATA 6.0Gb/s, 10000 rpm $3.5"$ SAS/2.5" SAS:SAS 6.0Gb/s, 15000 rpm $2.5"$ SSD:Solid State Drive (SSD), SATA 6.0Gb/s	Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU Slot 2: full-length, full-height, PCIe 3.0 x16** Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16** Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3				
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5, 10 support via Intel C602 Chipset	 ** Adapters >75W use auxiliary power connector(s) from PSU 				
Onboard SATA/SAS - SCU	Supports up to five SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives <i>SATAx4:</i> Four SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset <i>SATAx5:</i> Five SATA connectors for hard drives, SATA 3.0Gb/s,	SECURITY • Security chip (see information on left)				
	 RAID 0, 1, 5, 10 support via Intel C602 Chipset and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #5) 	 Side cover lock (ships with two identical keys) 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 				
Discrete SATA/SAS adapter	LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support	Administrator password Boot sequence control				
Chipset	Intel C602 Chipset	 Boot without keyboard, mouse, diskette 				
Front ports Rear ports IEEE 1394 adptr	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) No onboard 1394 ports;	 Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s) 				
	1394 models: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front	Preloaded operating system ²⁰ Windows [®] 7 Professional 64				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	Preloaded applications ⁵ (only some listed)				
Speaker Ethernet	Internal speaker for business audio Dual onboard gigabit ethernet, Intel 82579 and 82574	Rescue and Recovery®				
Security chip	Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	 Norton[®] Internet Security (30 days of virus definitions) Adobe[®] Reader[®] 				
Keyboard Mouse	Preferred Pro USB Keyboard (USB connector), 104-key, black Optical Wheel Mouse (USB connector), black	 Adobe Flash[®] Player Microsoft[®] Office 2013 preloaded; purchase product key to activate 				
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal,	 Corel[®] WinDVD[®] (DVD±RW model(s)) 				
	Climate Savers [®] Computing Gold, 80 PLUS [®] Gold qualified	Uland® DVD Mavia Englary® (DVD - BW model(c))				
Limited Warranty ¹	3-year parts and labor; more Lenovo® services see on S-TS sheet	Ulead [®] DVD MovieFactory [®] (DVD±RW model(s))				
Limited Warranty ¹ Intel AMT		Ulead® DVD MovieFactory® (DVD±RW model(s)) ISV certifications Please visit www.lenovo.com/support/ISV				
	3-year parts and labor; more Lenovo® services see on S-TS sheet	Ulead® DVD MovieFactory® (DVD±RW model(s)) ISV certifications				
	3-year parts and labor; more Lenovo® services see on S-TS sheet	Ulead® DVD MovieFactory® (DVD±RW model(s)) ISV certifications Please visit www.lenovo.com/support/ISV GREENGUARD® certified RoHS-compliant				

ThinkStation® D30 (4229) - TopSeller - II - withdrawn

Туре-		Memory	Memory		Onboard SATA/SAS	Pre-conf		Media	SATA	Graphics and GPU	1394		Chassis intrusion	Win7
model	Processor(s)	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	Computing	adptr	Global	switch	preload
4229-35U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 2000D	1394	No	Switch	Pro 64
4229-37U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 4000	1394	No	Switch	Pro 64
4229-38U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SAS	No	1x300GB 2.5" SAS	Media	DVD±RW	1xQuadro 4000	1394	No	Switch	Pro 64

A-channel DD3 memory controller (up to 1050MHz) method and the control of the contre control of the control of the control of the control of the con	Draaaaar		Tower						
Implementation Not Data2011 societs, supports up to Not processors Memory UDIMM or DDIML, ECC, ECU, ECC, ECC, ECC, ECC, ECC, ECC	Processor	Intel Xeon E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz),	Raven black color; metal case 8.3"W x 23.7"D x 19.1"H (with handle) 210mm W x 602mm D x 485mm H 60.6 lb (27.5kg) max configuration						
Memory processory, street 246-in DMM sockets processory, street 246-in DMM sockets processor,	Implementation	Two LGA2011 sockets, supports up to two processors							
Graphics Supports up to two NVDIA [®] Ouadro [®] 5000. Bay 5-9 3.5 1 [®] human For infection Graphics Supports up to two NVDIA [®] Ouadro [®] 5000. Bay 5-9 3.5 1 [®] human for infection Modia result Some: NVDIA [®] Cuadro [®] 5000. Some: NVDIA [®] Cuadro [®] 5000. Bay 5-9 3.5 1 [®] human for infection Media resader Modia: 25-in-1 Media card reader, internal USB 2.0 Some Millingthingthingthingthingthingthingthingth	Additional memory	 processor), sixteen 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 128GB max (16x8GB) RDIMM: up to PC3-12800 1600MHz, 256GB max (16x16GB) Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over eight DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported Maximum memory capacity is also limited by operating system 	3 optical • Toolless side cover removal 4 media • Toolless disk and optical drive removal • Toolless dapter retention • Toolless adapter retention • Toolless adapter rot icons • Back shelf support or optional rail kit • Toisk • Bisk • 9 disk • Back						
Media reader Media: 25-in-1 Media card reader, internal USB 2.0 Optical Super Multi-Burner DL DVD-RW SATA 1.5Gb/s Drive Hard drive(s) 3.5* SATA: SATA 6.0Gb/s; 7200 rpm 2.5* SATA: SATA 6.0Gb/s; 7000 rpm Sata 5* CATA: 3.5* SAS2.5* SAS: SAS 6.0GB/s; 71000 rpm Sata 5* CATA: SATA 6.0Gb/s; 7000 rpm 3.5* SAS2.5* SAS: SAS 6.0GB/s; 71000 rpm Sata 5* CATA: Sata 5* CATA: AHCI Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives; SATA 3.0Gb/s; RAID 0, 1, 5, 10 support via Intel C602 Chipset Sata Advanced Host Controller Unit (SCU) connectors AADD SATA 3.0GB/s; RAID 0, 1, 5, 10 support via Intel C602 Chipset Sata Advanced Host Controller Unit (SCU) connectors SATA 3.5* Five SATA connectors for hard drives, SATA 3.0Gb/s; RAID 0, 1, 5, 10 support via Intel C602 Chipset Sata 3.0GB/s; RAID 0, 1, 5, 10 support via Intel C602 Chipset SATA 3.5* CB SALS 2.5.***********************************	Graphics	Supports up to two NVIDIA [®] Quadro [®] 5000, NVIDIA SLI [®] Technology support (see accessory sheet O-HOL) Some: NVIDIA Quadro 2000D, PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W Some: NVIDIA Quadro 4000, PCIe x16 adapter, 2GB,	 Bay 4: 3.5", 1" high, external, for media reader Bay 5-9: 3.5", 1" high, internal, for disk* * Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed. 						
Onboard SATA - AHCI Four SATA Advanced Host Controller Interface (AHCI) connectors for potical sand hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange). RAID 0, 1, 5, 10 support via Intel C602 Chipset Four SATA 6.0Gb/s connectors for hard drives, SATA-K: Four SATA concorts for hard drives, SATA-K: Four SATA concorts for hard drives, SATA-K: Four SATA 6.0Gb/s, FAID 0, 1, 5, 10 support via Intel C602 Chipset Security chip (see information on left) SATA-K: Four SATA 6.0Gb/s, SATA-K: Four SATA 0.0Gb/s, SATA 3.0Gb/s, SATA 5.0Gb/s, SATA 6.0Gb/s, SAS 3.0Gb/s, RAID 0.1, 15, 10 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #9) Security chip (see information on left) Discrete SATA/SAS LSI: LSI" SAS 9240-8i, PCI Express [®] bus, and SAS HDD Enablement Module (Upgrade ROM #5) Security chip (see information on left) Discrete SATA/SAS LSI: LSI" SAS 9240-8i, PCI Express [®] bus, and tapter Security chip (see information on left) Thou DE 2.0, microphone (3.5mm), headphone (3.5mm) Houde (Upgrade ROM #5) Discrete SATA/SAS LSI: LSI" SAS 9240-8i, PCI Express [®] bus, and tapter Security chip massword Audio High Definition (HD) Audio, Realker & LC662 codee Hordes: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, medes brondes: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, modes: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, more on previ	Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm	Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16** Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3						
 SCU SCU SATAX: Four SATA connectors for hard drives, SATAX: Four SATA connectors for hard drives, SATAX: Five SATA connectors for hard drives, SATAX: Five SATA connectors for hard drives, SATAX: Five SATA SOLOPS, and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS* connectors for hard drives, SATA 3.0Gb/s, SATA 3.0Gb/s, SATA 3.0Gb/s, SATA 3.0Gb/s, SATA 4.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS* Connectors for hard drives, SATA 6.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #5) Discrete SATA/SAS LSI* SAS 2924-08; PCI Express* bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support Security chip (see information on left) Security chip (in rear for opt padlock; padlock loop (in rear for opt padlock; Security chip Sata (Security chip Valloch), to see control Boot sequence control Boot without keyboard, mouse, diskette Serial port (No enable/disable individually USB 2.0 ports enable/disable individually USB 2.0 ports enable/disable individually USB 2.0 ports enable/disable convernety Chassis intrusion switch on selected model(s) Windows* 7 Professional 64 Preloaded applications* (only a day of virus definitions) Adobe* Reader* Adobe* Reader* Adobe* Reade		Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange),							
Discrete SATA/SAS LSI: LSI® SAS 9240-8i, PCI Express® bus, adapter SATA 6.0Cb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support Chipset Intel C602 Chipset Boot sequence control Front ports Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Boot sequence control Rear ports Eight USB 2.0, microphone (3.5mm), headphone (3.5mm) USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) Preloaded operating system ²⁰ Audio High Definition (HD) Audio, Reattek® ALC662 codec Microsoft® Office 2013 preloaded; Speaker Internal speaker for business audio Freloaded applications ⁶ (only some listed) Reyboard Preferred Pro USB Keyboard (USB connector), 104-key, black Norton® Internet Security (30 days of virus definitions) Nouse Optical Wheel Mouse (USB connector), 104-key, black Optical Wheel Mouse (USB connector), 104-key, black Nower supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold 80 PLUS® Gold qualified INV certifications Limited Warranty ¹ 3-year parts and labor; more Lenovo® services see on S-TS sheet Please visit www.lenovo.com/support/ISV Intel AMT Supports Intel Active Management Technology 7 <td< td=""><td></td><td> (blue) for hard drives SATA x4: Four SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset SATAx5: Five SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset </td><td> Security chip (see information on left) Side cover lock (ships with two identical keys) 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 </td></td<>		 (blue) for hard drives SATA x4: Four SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset SATAx5: Five SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset 	 Security chip (see information on left) Side cover lock (ships with two identical keys) 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 						
Onlight Inter Code Conjugate Inter Code Conjugate Front ports Two USB 2.0, microphone (3.5mm), headphone (3.5mm) • USB 2.0 ports enable/disable individually Rear ports Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45), three analog audio ports (ine-in, line-out, mic-in) • USB 2.0 ports enable/disable individually IEEE 1394 adptr No onboard 1394 ports; • USB 2.0 ports enable/disable individually Audio High Definition (HD) Audio, Realtek® ALC662 codec • Windows® 7 Professional 64 Speaker Internal speaker for business audio • Norton® Internet Security (30 days of virus definitions) Ethernet Dual onboard gigabit ethernet, Intel 82579 and 82574 • Norton® Internet Security (30 days of virus definitions) Revoard Prefored Pro USB Keyboard (USB connector), 104-key, black • Microsoft® Office 2013 preloaded; purchase product key to activate Mouse Optical Wheel Mouse (USB connector), 104-key, black • Microsoft® Office 2013 preloaded; purchase product key to activate Initied Warranty' 3-year parts and labor; more Lenovo® services see on S-TS sheet • Ulead® DVD MovieFactory® (DVD±RW model(s)) Internal Supports Intel Active Management Technology 7 GREENGUARD® certified RoHS-compliant EVENCE Supports Intel Active Management Technology 7 GREENGUARD® certified RoHS		LSI: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support	 Boot sequence control Boot without keyboard, mouse, diskette 						
Hon ports Two OSB 2.0, finit/ophone (3.5mm), neadphone (3.5mm) USB 3.0 ports enable/disable concurrently Rear ports Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) USB 3.0 ports enable/disable concurrently IEEE 1394 adptr No onboard 1394 ports; 1394 models: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front Preloaded operating system ²⁰ Audio High Definition (HD) Audio, Realtek [®] ALC662 codec No onboard gigabit ethernet, Intel 82579 and 82574 Noton [®] Internal speaker for business audio Security chip Nuvoton NPCT421L for TPM function, TCG 1.2-compliant Noton [®] Internet Socurity (30 days of virus definitions) Mouse Optical Wheel Mouse (USB connector), Io4-key, black Mouse Optical Wheel Mouse (USB connector), Io4-key, black Power supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers [®] Computing Gold, 80 PLUS [®] Gold qualified ISV certifications Intel AMT Supports Intel Active Management Technology 7 GREENGUARD [®] certified RoHS-compliant Rescue and labor; more Lenovo [®] services see on S-TS sheet Please visit www.lenovo.com/support/ISV GREENGUARD [®] certified RoHS-compliant Supports Intel Active Management Technology 7		•							
IEEE 1394 adptr No onboard 1394 ports; 1394 models: additional FireWire PCle adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front Preloaded operating system ^{co} Audio High Definition (HD) Audio, Realtek® ALC662 codec Preloaded applications ⁵ (only some listed) Speaker Internal speaker for business audio Preloaded applications ⁵ (only some listed) Ethernet Dual onboard gigabit ethernet, Intel 82579 and 82574 Noton® Internet Security (30 days of virus definitions) Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black Adobe® Reader® Mouse Optical Wheel Mouse (USB connector), black Microsoft® Office 2013 preloaded; purchase product key to activate Power supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified ISV certifications Limited Warranty' 3-year parts and labor; more Lenovo® services see on S-TS sheet Please visit www.lenovo.com/support/ISV GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies		Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45),	USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s)						
Audio High Definition (HD) Audio, Realtek® ALC662 codec • Rescue and Recovery® Speaker Internal speaker for business audio • Norton® Internet Security (30 days of virus definitions) Ethernet Dual onboard gigabit ethernet, Intel 82579 and 82574 • Norton® Internet Security (30 days of virus definitions) Security chip Nuvoton NPCT421L for TPM function, TCG 1.2-compliant • Adobe® Reader® Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black • Microsoft® Office 2013 preloaded; purchase product key to activate Mouse Optical Wheel Mouse (USB connector), black • Microsoft® Office 2013 preloaded; Power supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified • Ulead® DVD MovieFactory® (DVD±RW model(s)) Limited Warranty ¹ 3-year parts and labor; more Lenovo® services see on S-TS sheet ISV certifications Intel AMT Supports Intel Active Management Technology 7 Please visit www.lenovo.com/support/ISV GREENGUARD® certified RoHS-compliant Supports ThinkVantage® technologies	IEEE 1394 adptr	No onboard 1394 ports; 1394 models: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front	Windows® 7 Professional 64						
Security chip Nuvoton NPCT421L for TPM function, TCG 1.2-compliant • Adobe Flash® Player Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black • Microsoft® Office 2013 preloaded; purchase product key to activate Mouse Optical Wheel Mouse (USB connector), black • Corel® WinDVD® (DVD±RW model(s)) Power supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified • Corel® WinDVD® (DVD±RW model(s)) Limited Warranty ³ 3-year parts and labor, more Lenovo® services see on S-TS sheet • ISV certifications Intel AMT Supports Intel Active Management Technology 7 GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies Supports ThinkVantage® technologies	Speaker	Internal speaker for business audio	 Rescue and Recovery[®] Norton[®] Internet Security (30 days of virus definitions) 						
Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black Mouse Optical Wheel Mouse (USB connector), black Power supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified Limited Warranty ¹ 3-year parts and labor; more Lenovo® services see on S-TS sheet Intel AMT Supports Intel Active Management Technology 7 GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies									
Mouse Power supply Optical Wheel Mouse (USB connector), black 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified - Correl® WinDVD® (DVD±RW model(s)) Limited Warranty' 3-year parts and labor; more Lenovo® services see on S-TS sheet - Ulead® DVD MovieFactory® (DVD±RW model(s)) Intel AMT Supports Intel Active Management Technology 7 - RENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies - Supports ThinkVantage® technologies		· · ·	 Microsoft[®] Office 2013 preloaded; 						
Power supply 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified • Ulead® DVD MovieFactory® (DVD±RW model(s)) Limited Warranty ¹ 3-year parts and labor; more Lenovo® services see on S-TS sheet • Ulead® DVD MovieFactory® (DVD±RW model(s)) Intel AMT Supports Intel Active Management Technology 7 • BSV certifications Please visit www.lenovo.com/support/ISV GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies Supports ThinkVantage® technologies		Optical Wheel Mouse (USB connector), black	 purchase product key to activate Corel® WinDVD® (DVD+BW model(s)) 						
Limited Warranty ¹ 3-year parts and labor; more Lenovo [®] services see on S-TS sheet ISV certifications Intel AMT Supports Intel Active Management Technology 7 Please visit www.lenovo.com/support/ISV GREENGUARD [®] certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage [®] technologies Supports ThinkVantage [®] technologies	Power supply		Ulead® DVD MovieFactory® (DVD±RW model(s))						
Intel AMT Supports Intel Active Management Technology 7 GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies	Limited Warranty ¹								
	Intel AMT	Supports Intel Active Management Technology 7	GREENGUARD [®] certified RoHS-compliant						
			Supports ThinkVantage® technologies						
More compatible accessories, please see ()-HOL sheet			More compatible accessories, please see O-HOL sheet						

ThinkStation® D30 (4223) - withdrawn

Product Specifications Reference (PSREF)

Type- model	Processor(s)		Memory DIMMs	Discrete SATA/SAS adapter	Onboard SATA/SAS -SCU	Pre-conf RAID	Hard drive(s)	Media reader	SATA optical	Graphics and GPU Computing	1394 adptr	Global	Chassis intrusion switch	
4223-54U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD ±RW	1xNVS 300	1394	No	Switch	Pro 64
4223-55U	1xE5-2603	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 400	1394	No	Switch	Pro 64
4223-56U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 400	1394	No	Switch	Pro 64
4223-57U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 600	1394	No	Switch	Pro 64
4223-58U	1xE5-2609	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 2000D	1394	No	Switch	Pro 64

Processor	Intel® Xeon® E5-2603 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x2), 4-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2609 processor (4C/4T, 2.4GHz, 10MB, 6.4 GT/s QPI x2), 4-channel DDR3 memory controller (up to 1066MHz)	• Raven black color; metal case • 8.3"W x 23.7"D x 19.1"H (with handle) • 210mm W x 602mm D x 485mm H				
Implementation	Two LGA2011 sockets, supports up to two processors	1 optical • 60.6 lb (27.5kg) max configuration				
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 128GB max (16x8GB) RDIMM: up to PC3-12800 1600MHz, 256GB max (16x16GB)	2 optical 3 optical 3 optical <u>4 media</u> Toolless disk and optical drive removal Toolless adapter retention				
Additional memory disclaimers	 Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over eight DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported Maximum memory capacity is also limited by operating system (e.g. Windows 7 Professional 64 supports up to 192GB) 	 Illuminated front icons Back shelf support or optional rail kit Rack shelf support or optional rail kit 				
Graphics	Supports up to two NVIDIA [®] Quadro [®] 5000, NVIDIA SLI [®] Technology support (see accessory sheet O-HOL) Some: NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB, DMS59 to dual single-link DVI-I, 17.5W Some: NVIDIA Quadro 400, PCIe x16 adapter, 512MB, one DisplayPort [™] , one dual-link DVI-I, 32W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000D, PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W	Bay 1-3: 5.25", 1.6" high, external, for optical Bay 4: 3.5", 1" high, external, for media reade Bay 5-9: 3.5", 1" high, internal, for disk* * Bay 5 is available on models with the SATA or SAS Ha Disk Drive enablement module installed. Slot 1: half-length, full-height, PCle 3.0 x16 (x4 elec, near Cl Slot 2: full-length, full-height, PCle 3.0 x16 (x4 elec, near Cl Slot 2: full-length, full-height, PCle 3.0 x16 (x4 elec, near Cl Slot 2: full-length, full-height, PCle 3.0 x16* Slot 3: full-length, full-height, PCle 3.0 x16* Slot 4: full-length, full-height, PCle 3.0 x16* Slot 5: full-length, full-height, PCle 2.0 x4 Slot 6: half-length, full-height, 32-bit PCl 2.3 ** Adapters >75W use auxiliary power connector(s) from PSU				
Media reader Optical Hard drive(s)	Media:25-in-1Media card reader, internal USB 2.0Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive3.5" SATA:SATA 6.0Gb/s, 7200 rpm2.5" SATA:SATA 6.0Gb/s, 10000 rpm3.5" SAS/2.5" SAS:SAS 6.0Gb/s, 15000 rpm					
Onboard SATA	2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s Four SATA Advanced Host Controller Interface (AHCI) connectors for					
- AHCI	opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5, 10 support via Intel C602 Chipset	SECURITY • Security chip (see information on left)				
Onboard SATA/SAS - SCU	 Supports up to five SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATAx4: Four SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset SATAx5: Five SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS⁴ connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset and SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset and SATA MDD Enablement Module (Upgrade ROM #9) 	 Side cover lock (ships with two identical keys) 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 Administrator password Boot sequence control Boot serial port I/O enable/disable USB 2.0 ports enable/disable individually 				
Discrete SATA/SAS adapter	LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support	USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s)				
Chipset	Intel C602 Chipset	Preloaded operating system ²⁰				
Front ports Rear ports IEEE 1394 adptr	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) No onboard 1394 ports; 1394 models: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front	 Preloaded operating system²⁰ Windows® 7 Professional 64 Preloaded applications⁵ (only some listed) Rescue and Recovery[®] Norton[®] Internet Security (30 days of virus definitions) Adobe[®] Reader[®] 				
Audio Speaker Ethernet	High Definition (HD) Audio, Realtek [®] ALC662 codec Internal speaker for business audio Dual onboard gigabit ethernet, Intel 82579 and 82574 Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	 Adobe Flash[®] Player Microsoft[®] Office 2013 preloaded; purchase product key to activate Corel[®] WinDVD[®] (DVD±RW model(s)) Ulead[®] DVD MovieFactory[®] (DVD±RW model(s)) 				
Security chip Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black					
Mouse	Optical Wheel Mouse (USB connector), black	ISV certifications Please visit www.lenovo.com/support/ISV				
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers [®] Computing Gold, 80 PLUS [®] Gold qualified	GREENGUARD [®] certified				
Limited Warranty ¹ Intel AMT	3-year parts and labor; more Lenovo [®] services see on S-TS sheet Supports Intel Active Management Technology 7	RoHS-compliant EPEAT™ Gold rating				
	Supports into Active Management reclinicity /	Supports ThinkVantage [®] technologies				
		More compatible accessories, please see O-HOL sheet				

See footnotes for important warranty information US model(s) announced April 3, 2012 US model(s) withdrawn effective December 3, 2013

ThinkStation[®] D30 (4223) - II - withdrawn

Product Specifications Reference (PSREF)

Type-		Memory	Memorv	Discrete SATA/SAS	Onboard SATA/SAS	Pre-conf		Media	SATA	Graphics	1394	Chassis intrusion	
model	Processor(s)	(MHz/type)	DIMMs	adapter	-SCU	RAID	Hard drive(s)	reader	optical	adapter(s)	adptr Global	switch	preload
4223-59U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 2000D	1394 Global	Switch	Pro 64
4223-61U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 4000	1394	Switch	Pro 64
4223-62U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 600	1394	Switch	Pro 64
4223-66U	1xE5-2620	1333MHz UDIMM	1x4GB	No	SAS	No	1x300GB 2.5" SAS	Media	DVD±RW	1xQuadro 2000D	1394	Switch	Pro 64
4223-68U	1xE5-2630	1333MHz UDIMM	1x4GB	No	SATAx4	No	1x500GB 3.5" SATA	Media	DVD±RW	1xQuadro 2000D	1394	Switch	Pro 64
4223-69U	1xE5-2630	1333MHz UDIMM	2x4GB	No	SAS	No	1x300GB 2.5" SAS	Media	DVD±RW	1xQuadro 4000	1394 Global	Switch	Pro 64

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Processor	Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2630 processor (6C/12T, 2.3GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1333MHz)	Tower • Raven black color; metal case • 8.3"W x 23.7"D x 19.1"H (with handle) • 210mm W x 602mm D x 485mm H • 60.6 lb (27.5kg) max configuration • 55-liter Permeter black benefits on ten function					
Implementation	Two LGA2011 sockets, supports up to two processors	• Removable handle on top front					
Memory Additional memory disclaimers	 UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets UDIMM: up to PC3-10600 1333MHz, 128GB max (16x8GB) RDIMM: up to PC3-12800 1600MHz, 256GB max (16x16GB) Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over eight DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported Maximum memory capacity is also limited by operating system 	 <u>3 optical</u> <u>4 media</u> <u>5 disk*</u> <u>6 disk</u> <u>7 disk</u> <u>8 disk</u> <u>9 disk</u> <u>1000000000000000000000000000000000000</u>					
Graphics	(e.g. Windows 7 Professional 64 supports up to 192GB) Supports up to two NVIDIA® Quadro® 5000,	Bay 1-3: 5.25", 1.6" high, external, for optical Bay 4: 3.5", 1" high, external, for media reader Bay 5-9: 3.5", 1" high, internal, for disk*					
	NVIDIA SLI® Technology support (see accessory sheet O-HOL) Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000D, PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W Some: NVIDIA Quadro 4000, PCIe x16 adapter, 2GB,	 * Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed. Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU) Slot 2: full-length, full-height, PCIe 3.0 x16** Slot 3: full-length, full-height, 32-bit PCI 2.3 					
Madia readar	two DisplayPort, one dual-link DVI-I, one stereo, 142W	Slot 4: full-length, full-height, PCIe 3.0 x16**					
Media reader Optical Hard drive(s)	Media: 25-in-1 Media card reader, internal USB 2.0 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive 3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm	Slot 5: full-length, full-height, PCle 2.0 x4 Slot 6: half-length, full-height, 32-bit PCl 2.3 ** Adapters >75W use auxiliary power connector(s) from PSU					
Ophoord CATA	2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s	SECURITY					
Onboard SATA - AHCI	Four SATA Advanced Host Controller Interface (AHCI) connectors for opticals and hard drives, two SATA 6.0Gb/s connectors (red), two SATA 3.0Gb/s connectors (orange), RAID 0, 1, 5, 10 support via Intel C602 Chipset	 Seconity Seconity chip (see information on left) Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; 					
- SCU	Supports up to five SATA or SAS Storage Controller Unit (SCU) connectors (blue) for hard drives SATAx4: Four SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset SATAx5: Five SATA connectors for hard drives, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support via Intel C602 Chipset and SATA HDD Enablement Module (Upgrade ROM #9) SAS: Five SATA/SAS ⁴ connectors for hard drives, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support via Intel C602 Chipset and SAS HDD Enablement Module (Upgrade ROM #5)	 padlock prohibits side cover removal) Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) Power-on password Administrator password Boot sequence control Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently <i>Chassis intrusion switch on selected model(s)</i> 					
Discrete SATA/SAS adapter	LSI: LSI [®] SAS 9240-8i, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support	Preloaded operating system ²⁰					
Chipset	Intel C602 Chipset	Windows [®] 7 Professional 64					
Front ports Rear ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm) Eight USB 2.0, two USB 3.0 (blue ports), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	 Preloaded applications⁵ (only some listed) Rescue and Recovery[®] Norton[®] Internet Security (30 days of virus definitions) 					
IEEE 1394 adptr	No onboard 1394 ports; 1394 models: additional FireWire PCIe adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front	 Adobe[®] Reader[®] Adobe Flash[®] Player Microsoft[®] Office 2013 preloaded; 					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	purchase product key to activate					
Speaker	Internal speaker for business audio	 Corel[®] WinDVD[®] (DVD±RW model(s)) Ulead[®] DVD MovieFactory[®] (DVD±RW model(s)) 					
Ethernet Security chip	Dual onboard gigabit ethernet, Intel 82579 and 82574 Nuvoton NPCT421L for TPM function, TCG 1.2-compliant	ISV certifications					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	Please visit www.lenovo.com/support/ISV					
Mouse Power supply	Optical Wheel Mouse (USB connector), black 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers [®] Computing Gold , 80 PLUS [®] Gold qualified	GREENGUARD [®] certified RoHS-compliant EPEAT™ Gold rating					
Limited Warranty ¹	3-year parts and labor; more Lenovo® services see on S-TS sheet	Supports ThinkVantage [®] technologies					
Intel AMT	Supports Intel Active Management Technology 7						
	portant warranty information	More compatible accessories, please see O-HOL sheet © Lenovo					

See footnotes for important warranty information US model(s) announced April 3, 2012 US model(s) withdrawn effective December 3, 2013

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.

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- ¹ 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. Support unrelated to a warranty issue may be subject to additional charges.
- ⁴ SATA/SAS: The system configuration supports the installation of SATA, SAS, or mixing of SATA and SAS. But mixing of SATA and SAS disks into one RAID array will not be supported.
- ⁵ Included software may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.
- Lenovo 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 Lenovo Warranty Services 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 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.
- International Warranty Service is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁴ Response times may vary. May exclude some holidays. Telephone support may be subject to additional charges.
- ²⁰ Operating System: Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

ThinkStation

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