

ThinkStation® S30 Platform Specifications - I of IV

Text in red shows that these features only apply to MT type 0568, 0569, and 0606 models, text in green shows that the features are supported on other models except MT type 0568, 0569, and 0606 models

Chipset	Intel C602 Chipset
Intel AMT	<i>MT type 0568, 0569, and 0606:</i> Intel Active Management Technology 7 <i>Others MT types:</i> Intel Active Management Technology 8

Processor One LGA2011 socket, supports one processor from Intel Xeon E5-2600 E5-2600 v2, E5-1600, and E5-1600 v2 family, integrated 4-channel DDR3 memory controller, supports the following:

Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Intel QPI Speed	# of QPI Links	Max TDP	Memory Speed	Intel vPro technology	MT type compatible
Xeon E5-2603	4	4	1.8 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2609	4	4	2.4 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2620	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	60 W	1333MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2637	2	4	3 GHz	3.5 GHz	5 MB	8 GT/s	2	80 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2640	6	12	2.5 GHz	3 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10 MB	8 GT/s	2	130 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2650	8	16	2 GHz	2.8 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20 MB	8 GT/s	2	70 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2660	8	16	2.2 GHz	3 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15 MB	8 GT/s	2	130 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20 MB	8 GT/s	2	130 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2690	8	16	2.9 GHz	3.8 GHz	20 MB	8 GT/s	2	135 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-1603	4	4	2.8 GHz		10 MB			130 W	1066MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-1607	4	4	3 GHz		10 MB			130 W	1066MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-1620	4	8	3.6 GHz	3.8 GHz	10 MB			130 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-1650	6	12	3.2 GHz	3.8 GHz	12 MB			130 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-1660	6	12	3.3 GHz	3.9 GHz	15 MB			130 W	1600MHz	vPro	0569, 0567, 0568, 0606
Xeon E5-2603 v2	4	4	1.8 GHz	1.8 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro	4351, 4352
Xeon E5-2609 v2	4	4	2.5 GHz	2.5 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro	4351, 4352
Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro	4351, 4352
Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15 MB	7.2 GT/s	2	60 W	1600MHz	vPro	4351, 4352
Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro	4351, 4352
Xeon E5-2637 v2	4	8	3.5 GHz	3.8 GHz	15 MB	8 GT/s	2	130 W	1866MHz	vPro	4351, 4352
Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20 MB	7.2 GT/s	2	95 W	1600MHz	vPro	4351, 4352
Xeon E5-2643 v2	6	12	3.5 GHz	3.8 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro	4351, 4352
Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25 MB	7.2 GT/s	2	70 W	1600MHz	vPro	4351, 4352
Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20 MB	8 GT/s	2	95 W	1866MHz	vPro	4351, 4352
Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25 MB	8 GT/s	2	95 W	1866MHz	vPro	4351, 4352
Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro	4351, 4352
Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro	4351, 4352
Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro	4351, 4352
Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro	4351, 4352
Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30 MB	8 GT/s	2	115 W	1866MHz	vPro	4351, 4352
Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30 MB	8 GT/s	2	130 W	1866MHz	vPro	4351, 4352
Xeon E5-1607 v2	4	4	3 GHz		10 MB			130 W	1600MHz	vPro	4351, 4352
Xeon E5-1620 v2	4	8	3.7 GHz	3.9 GHz	10 MB			130 W	1866MHz	vPro	4351, 4352
Xeon E5-1650 v2	6	12	3.5 GHz	3.9 GHz	12 MB			130 W	1866MHz	vPro	4351, 4352
Xeon E5-1660 v2	6	12	3.7 GHz	4 GHz	15 MB			130 W	1866MHz	vPro	4351, 4352

Notes:

1. ThinkStation S30 support one processor.
2. Intel Xeon processor numbering system is an alpha numeric representation of product line, product family and version. An 'L' suffix will be used to identify a low power processor.
More details please see http://www.intel.com/products/processor_number
3. All information is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see <http://ark.intel.com/products/family/59138/Intel-Xeon-Processor-E5-Family/server>

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Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)					
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of RDIMM and UDIMM is not supported 					
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology (Quadro 5000 and Quadro K5000 SLI), NVIDIA Maximus technology, supports the following NVIDIA Quadro, NVS graphics adapters and Tesla GPU computing processors:					
	Memory Size	CUDA Processor Cores	Display Connectors	Max. Displays	# of slots	Power
NVIDIA Quadro and NVS Graphics						
Quadro K6000	12GB	2880	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	225W
Quadro K5000	4GB	1536	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	122W
Quadro K4000	3GB	768	1 dual-link DVI-I 2 DisplayPort	4*	1	80W
Quadro K2000	2GB	384	1 dual-link DVI-I 2 DisplayPort	4*	1	51W
Quadro K2000D	2GB	384	1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort	4*	1	51W
Quadro K600	1GB	192	1 dual-link DVI-I 1 DisplayPort	2	1	41W
Quadro 410	512MB	192	1 dual-link DVI-I 1 DisplayPort	2	1	37W
Quadro 6000	6GB	448	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	2	204W
Quadro 5000	2.5GB	352	1 dual-link DVI-I 2 DisplayPort, 1 Stereo	2	2	152W
Quadro 4000	2GB	256	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	1	142W
Quadro 2000	1GB	192	1 dual-link DVI-I 2 DisplayPort	2	1	62W
Quadro 2000D	1GB	192	2 dual-link DVI-I	2	1	62W
Quadro 600	1GB	96	1 dual-link DVI-I 1 DisplayPort	2	1	40W
NVS 510	2048 MB	192	4 mini DisplayPort (with 4 mini DP to DP dongles)	4	1	35W
NVS 315	1024MB	48	DMS59 to dual single-link DVI-I or dual DisplayPort	2	1	19.5W
NVS 310	512 MB	48	2 DisplayPort	2	1	19.5W
NVS 300	512 MB	16	DMS59 to dual single- link DVI-I	2	1	17.5W
NVIDIA Tesla GPU Computing Processors (as part of NVIDIA Maximus Platform)						
Tesla K20	5GB	2496				225W
Tesla C2075	6GB	448				225W

* Quadro K4000, K2000, and K2000D are equipped with 3 onboard display connectors, 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays

Notes:

- ThinkStation S30 support NVIDIA Maximus technology. Maximus technology combines the visualization and interactive design capability of NVIDIA Quadro graphics and the high performance computing power of NVIDIA Tesla GPU computing processors in a single workstation. For more information on the latest Maximus certifications for ThinkStation and how to build Maximus system, please see www.nvidia.com/object/maximus.html
- CUDA Processor Cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.

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Personal Systems Reference (PSREF)

Onboard drive controllers	<ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	<p><i>One the following, depending on model:</i></p> <p>LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support</p> <p>LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support</p>
Hard drive(s)	<p><i>Supports the following:</i></p> <p>3.5" SATA: SATA 6.0Gb/s, 7200 rpm, up to 4TB 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm, up to 1TB 3.5" SAS: SAS 6.0Gb/s, 15000 rpm, up to 600GB 2.5" SAS: SAS 6.0Gb/s, 15000 rpm, up to 300GB 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models, up to 300GB</p>
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Drive Bays	Two external 5.25" bays for opticals, three internal 3.5" bays for hard drives
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	<p>MT type 0568, 0569, and 0606: Two USB 2.0, microphone (3.5mm), headphone (3.5mm)</p> <p>Others MT types: Two USB 3.0, microphone (3.5mm), headphone (3.5mm)</p>
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Security	<ul style="list-style-type: none"> Security chip: <ul style="list-style-type: none"> MT type 0568, 0569, and 0606: STMicroelectronics ST19WP18 for TPM function, TCG 1.2-compliant Others MT types: STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant 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 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 (optional)
Mechanical	<ul style="list-style-type: none"> 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
Expansion slots	<p>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</p> <p>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</p> <p>Slot 3: full-length, full-height, PCIe 3.0 x16**</p> <p>Slot 4: full-length, full-height, 32-bit PCI 2.3</p> <p>Slot 5: half-length, full-height, PCIe 2.0 x4</p> <p>* Adapters >75W use auxiliary power connector(s) from PSU</p>
Serviceability	<ul style="list-style-type: none"> Removable handle on top front Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support

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Personal Systems Reference (PSREF)

ISV certifications	Please visit www.lenovo.com/support/ISV
Environmental certifications	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Warranty	1 or 3-year limited warranty, parts and labor
ThinkVantage®	Supports ThinkVantage® technologies
Preloaded operating systems	<p><i>One the following, depending on model:</i></p> <ul style="list-style-type: none"> • Windows® 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit
Preloaded applications (only some listed)	<p><i>For Windows 7 models:</i></p> <ul style="list-style-type: none"> • Rescue and Recovery® • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW model(s)) • Ulead® DVD MovieFactory® (DVD±RW model(s)) <p><i>For Windows 8 models:</i></p> <ul style="list-style-type: none"> • Evernote® • Norton Internet Security (30 days of virus definitions) • Norton Studio • Skype™ • Microsoft Office 2013 preloaded; purchase product key to activate • Cyberlink Power2Go (DVD±RW model(s)) • Cyberlink PowerProducer (DVD±RW model(s))