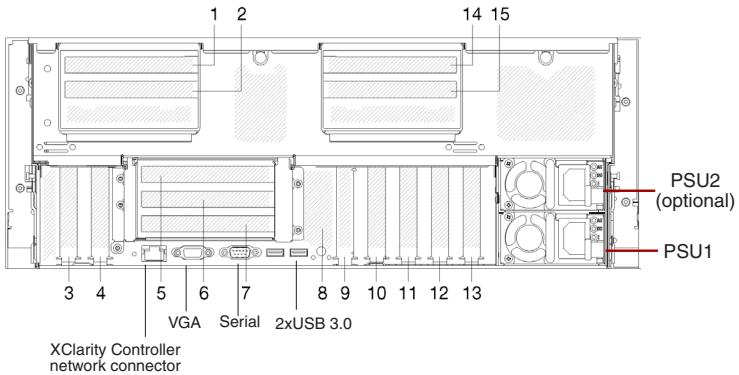


ThinkSystem SR860 Platform Specifications

Product Specifications Reference (PSREF)

Components	Specification																																																																																										
Form factor	4U rack																																																																																										
Dimensions	Height: 175 mm (6.9 in). Width: 482 mm (19.0 in) with rack latches. Depth: 765.88 mm (30.15 in) without security bezel																																																																																										
Weight	Maximum configuration: 87.74 lb (39.8 kg)																																																																																										
Processor	Supports up to four 165W Intel Xeon Scalable family processors, Gold or Platinum. 2 processor sockets on system board, 2 processor sockets on optional processor and memory expansion tray. Up to 28 cores at 2.1GHz, up to 3.6GHz with 4 cores. Four processors are connected in ring topology with two 10.4GT/s UPI (Ultra Path Interconnect) per processor																																																																																										
Chipset	Intel C624 Platform Controller Hub																																																																																										
Memory	Up to 48 DIMM sockets. 24 DIMM sockets on system main board, 24 DIMM sockets on optional processor and memory expansion tray. Each processor supports up to 12 DIMM sockets with 6 channels. DDR4-2666. RDIMMs, LRDIMMs, 3DS RDIMMs are supported, but memory types cannot be intermixed. 3DS RDIMM is planned to available later																																																																																										
Memory capacity	Up to 1.5TB with 48 x 32GB RDIMMs and four processors. Or up to 3TB with 48 x 64GB LRDIMMs and four processors. Or up to 6TB with 48 x 128GB 3DS RDIMMs and four -M suffix processors. Or up to 3TB with 24 x 128GB 3DS RDIMMs and four non -M suffix processors. -M suffix processor supports 1.5TB memory per socket, non -M suffix processor supports 768GB memory per socket																																																																																										
Memory protection	ECC, memory mirroring, and memory sparing																																																																																										
Storage controllers	Supports the following RAID/HBA adapters:																																																																																										
	<table border="1"> <thead> <tr> <th>Feature</th> <th>Interface</th> <th>Drive type</th> <th>RAID levels</th> <th>JBOD</th> <th>Cache</th> <th>Cache protection</th> <th>FastPath</th> <th>Max qty</th> </tr> </thead> <tbody> <tr> <td>530-8i</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>0/1/10/5/50</td> <td>Yes</td> <td>None</td> <td>None</td> <td>Yes</td> <td>2</td> </tr> <tr> <td>730-8i</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>0/1/10/5/50</td> <td>Yes</td> <td>1GB</td> <td>None</td> <td>No</td> <td>2</td> </tr> <tr> <td>930-8i</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>0/1/10/5/50/6/60</td> <td>Yes</td> <td>2GB</td> <td>Flash backup</td> <td>Yes</td> <td>2</td> </tr> <tr> <td>930-16i</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>0/1/10/5/50/6/60</td> <td>Yes</td> <td>4GB</td> <td>Flash backup</td> <td>Yes</td> <td>1</td> </tr> <tr> <td>430-8i</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>-</td> <td>Yes</td> <td>None</td> <td>None</td> <td>-</td> <td>2</td> </tr> <tr> <td>430-16i</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>-</td> <td>Yes</td> <td>None</td> <td>None</td> <td>-</td> <td>1</td> </tr> <tr> <td>930-8e</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>0/1/10/5/50/6/60</td> <td>Yes</td> <td>4GB</td> <td>Flash backup</td> <td>Yes</td> <td>4</td> </tr> <tr> <td>430-8e</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>-</td> <td>Yes</td> <td>None</td> <td>None</td> <td>-</td> <td>10</td> </tr> <tr> <td>430-16e</td> <td>12Gbps SAS</td> <td>SATA/SAS</td> <td>-</td> <td>Yes</td> <td>None</td> <td>None</td> <td>-</td> <td>10</td> </tr> </tbody> </table> <p>Note: 730-8i is available in China only</p>	Feature	Interface	Drive type	RAID levels	JBOD	Cache	Cache protection	FastPath	Max qty	530-8i	12Gbps SAS	SATA/SAS	0/1/10/5/50	Yes	None	None	Yes	2	730-8i	12Gbps SAS	SATA/SAS	0/1/10/5/50	Yes	1GB	None	No	2	930-8i	12Gbps SAS	SATA/SAS	0/1/10/5/50/6/60	Yes	2GB	Flash backup	Yes	2	930-16i	12Gbps SAS	SATA/SAS	0/1/10/5/50/6/60	Yes	4GB	Flash backup	Yes	1	430-8i	12Gbps SAS	SATA/SAS	-	Yes	None	None	-	2	430-16i	12Gbps SAS	SATA/SAS	-	Yes	None	None	-	1	930-8e	12Gbps SAS	SATA/SAS	0/1/10/5/50/6/60	Yes	4GB	Flash backup	Yes	4	430-8e	12Gbps SAS	SATA/SAS	-	Yes	None	None	-	10	430-16e	12Gbps SAS	SATA/SAS	-	Yes	None	None	-	10
Feature	Interface	Drive type	RAID levels	JBOD	Cache	Cache protection	FastPath	Max qty																																																																																			
530-8i	12Gbps SAS	SATA/SAS	0/1/10/5/50	Yes	None	None	Yes	2																																																																																			
730-8i	12Gbps SAS	SATA/SAS	0/1/10/5/50	Yes	1GB	None	No	2																																																																																			
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430-8i	12Gbps SAS	SATA/SAS	-	Yes	None	None	-	2																																																																																			
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430-16e	12Gbps SAS	SATA/SAS	-	Yes	None	None	-	10																																																																																			
Disk drive bays	Supports 8 front 2.5" SATA/SAS HS bays with maximum 4 AnyBay, or 16 front 2.5" SATA/SAS HS bays with maximum 8 AnyBay Optional one or two internal M.2 SSD for boot, dual M.2 SSD supports mirroring																																																																																										
Internal storage	<table border="1"> <tbody> <tr> <td>2.5" HDD, SATA6Gbps, 7.2K</td> <td>1TB/2TB</td> </tr> <tr> <td>2.5" HDD, SAS12Gbps, 7.2K</td> <td>1TB/2TB</td> </tr> <tr> <td>2.5" HDD, SAS12Gbps, 10K</td> <td>300GB/300GB SED/600GB/600GB SED/900GB/1.2TB/1.8TB</td> </tr> <tr> <td>2.5" HDD, SAS12Gbps, 15K</td> <td>300GB/600GB/900GB</td> </tr> <tr> <td>2.5" SSD, SAS12Gbps</td> <td>400GB/800GB/3.84TB/7.68TB</td> </tr> <tr> <td>2.5" SSD, SATA6Gbps</td> <td>240GB/480GB</td> </tr> <tr> <td>2.5" NVMe SSD, AnyBay</td> <td>800GB/960GB/1.6TB/1.92TB/3.84TB</td> </tr> <tr> <td>NVMe SSD, PCIe 3.0 x4, HHHL adapter</td> <td>1.6TB/1.92TB/3.2TB/3.84TB, up to 10</td> </tr> <tr> <td>M.2 SATA SSD for boot</td> <td>32GB/128GB/480GB</td> </tr> </tbody> </table>	2.5" HDD, SATA6Gbps, 7.2K	1TB/2TB	2.5" HDD, SAS12Gbps, 7.2K	1TB/2TB	2.5" HDD, SAS12Gbps, 10K	300GB/300GB SED/600GB/600GB SED/900GB/1.2TB/1.8TB	2.5" HDD, SAS12Gbps, 15K	300GB/600GB/900GB	2.5" SSD, SAS12Gbps	400GB/800GB/3.84TB/7.68TB	2.5" SSD, SATA6Gbps	240GB/480GB	2.5" NVMe SSD, AnyBay	800GB/960GB/1.6TB/1.92TB/3.84TB	NVMe SSD, PCIe 3.0 x4, HHHL adapter	1.6TB/1.92TB/3.2TB/3.84TB, up to 10	M.2 SATA SSD for boot	32GB/128GB/480GB																																																																								
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Optical	No internal optical bay. Optional USB DVD±RW optical drive																																																																																										
Network interfaces	One dedicated management port. One LOM slot for customized LOM with up to four RJ-45 or SFP+ ports, up to 10GbE. Wake-on-LAN and NC-SI are available on one port of LOM. Optional ML2 or PCIe adapters are supported. ML2 adapter requires riser card with ML2 slot.																																																																																										
Security features	Power-on and admin password. Trusted Platform Module, TCG 1.2 compliant, upgrade to 2.0 via UEFI setting. Optional TCM in China only. Optional lockable security bezel																																																																																										
Operating systems supported	Microsoft Windows Server 2016/2012 R2. Red Hat Enterprise Linux 7.4/6.9. SUSE Linux Enterprise Server 12 SP3/11 SP4. VMware ESXi 6.5 U1/6.0 U3																																																																																										
Systems management	XClarity Controller Advanced, optional upgrades to Enterprise is available. Energy Manager. XClarity Administrator. Lenovo Capacity Planner. Light Path Diagnostics with optional LCD diagnostic pull-out panel																																																																																										
GPU support	Up to two NVIDIA Tesla M60 GPU accelerator, 300W each																																																																																										
Base warranty	MT 7X69: 3-year limited onsite service with 9x5/NBD MT 7X70: 1-year limited onsite service with 9x5/NBD																																																																																										
Power supply	Up to two redundant hot-swap 750W/1100W/1600W/2000W 80 PLUS Platinum qualified AC power supplies. 1600W and 2000W are 200V - 240V, others are 100V - 240V																																																																																										
Video	Integrated Matrox G200 in XClarity Controller																																																																																										

Components	Specification																
Cooling	Six hot-swap fans, N + 1 redundancy																
Front ports	One XClarity Controller USB connector, one USB 2.0 or USB 3.0 (model dependent), one VGA																
Rear ports	One VGA, two USB 3.0, one serial, one XClarity Controller network connector																
	Supports ASHRAE A4 with limitations.																
Environmental specification	<table border="1"> <tbody> <tr> <td>Temperature - operating</td> <td>A4: 5°C to 45°C (41°F to 113°F)</td> </tr> <tr> <td></td> <td>A3: 5°C to 40°C (41°F to 104°F)</td> </tr> <tr> <td></td> <td>A2: 10°C to 35°C (50°F to 95°F)</td> </tr> <tr> <td>Temperature - non operating (no package)</td> <td>-10°C to 60°C (14°F to 140°F)</td> </tr> <tr> <td>Temperature - non operating (with package)</td> <td>-40°C to 70°C (-40°F to 158°F)</td> </tr> <tr> <td>Altitude - operating</td> <td>(Unpressurized): 0-10000ft (0-3048m)</td> </tr> <tr> <td>Humidity - operating, non-condensing</td> <td>A4: 8%~90%. A3: 8%~85%. A2: 8%~80%</td> </tr> <tr> <td>Humidity - storage (with package), non-condensing</td> <td>8%~90%</td> </tr> </tbody> </table> <p>Models should meet the following requirements to support A3 and A4:</p> <ul style="list-style-type: none"> • Two PSU installed • NVMe drives not installed • PCIe flash adapter not installed • GPU not installed 	Temperature - operating	A4: 5°C to 45°C (41°F to 113°F)		A3: 5°C to 40°C (41°F to 104°F)		A2: 10°C to 35°C (50°F to 95°F)	Temperature - non operating (no package)	-10°C to 60°C (14°F to 140°F)	Temperature - non operating (with package)	-40°C to 70°C (-40°F to 158°F)	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)	Humidity - operating, non-condensing	A4: 8%~90%. A3: 8%~85%. A2: 8%~80%	Humidity - storage (with package), non-condensing	8%~90%
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Humidity - operating, non-condensing	A4: 8%~90%. A3: 8%~85%. A2: 8%~80%																
Humidity - storage (with package), non-condensing	8%~90%																
Environmental certification	Energy Star Server 2.1 certified. More environmental information please see: www.lenovo.com/social_responsibility/us/en/environment/																



Expansion slots

Up to 13 PCIe slots with one LOM slot and one M.2 slot

Slot 1-2 (riser card 2)	One PCIe 3.0 x16 for GPU or two PCIe 3.0 x8, full height, full length
Slot 3 (onboard)	PCIe 3.0 x16, for riser card 2 or used as a low profile slot if riser card 2 not used
Slot 4 (onboard)	PCIe 3.0 x8, low profile
Slot 5-7 (riser card 1)	<p>Supports one of the following for riser card:</p> <p>Option 1: PCIe 3.0 x8/x8/x8 (slot 5-7). Full height, half length</p> <p>Option 2: PCIe 3.0 x8/x8/x8 ML2 (slot 5-7). Full height, half length</p> <p>Option 4: PCIe 3.0 x8/x16 ML2 (slot 5 and 7). Full height, half length</p>
Slot 8 (onboard)	M.2 slot for M.2 enablement kit, internal
Slot 9 (onboard)	LOM slot, low profile
Slot 10-12(onboard)	PCIe 3.0 x8, low profile
Slot 13 (onboard)	PCIe 3.0 x16, for riser card 3 or used as a low profile slot if riser card 3 not used
Slot 14-15 (riser card 3)	One PCIe 3.0 x16 for GPU or two PCIe 3.0 x8, full height, full length, 4 CPU required

System unique options for ThinkSystem SR850

7B27A03953	ThinkSystem SR850/SR860 Processor and Memory Expansion Tray
7C57A03999	ThinkSystem SR850/SR860 2.5" Anybay 8-Bay BP Kit
7C57A03998	ThinkSystem SR850/SR860 2.5" SATA/SAS 8-Bay BP Kit
7C57A03950	ThinkSystem 2U x8/x8/x8 PCIe FH Riser 1
7C57A03951	ThinkSystem 2U x8/x8/x8/x8ML2 PCIe FH Riser 1
7C57A03952	ThinkSystem 2U x8/x16ML2 PCIe FH Riser 1
4C57A08184	ThinkSystem SR860 2x8 PCIe FH Riser 2 (Slot 1 & 2)
4C57A08186	ThinkSystem SR860 1x16 PCIe FH Riser 2 (Slot 1)
4C57A08185	ThinkSystem SR860 2x8 PCIe FH Riser 3 (Slot 14 & 15)
4C57A08187	ThinkSystem SR860 1x16 PCIe FHFL Riser 3 (Slot 14)
00KG655	NVIDIA Tesla M60 GPU, PCIe (Passive)

Model	Product	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	M.2 Drives	Networking (LOM/ML2/PCIe)	Available PCIe Slots	Front Panel	Front USB	System Management	Power Supply	Warranty	Ann Date (mm/yy)
7X69SG0600	ThinkSystem SR860	China	2x Xeon Gold 5118 12C/2.3GHz/16.5MB/105W/DDR4-2400	4x 16GB RDIMM DDR4-2666	730-8i 1GB	8x 2.5" SATA/SAS HS	Open	None	4xGbE RJ-45 LOM	2xPCIe x16 LP, 4x PCIe x8 LP	USB 2.0	XClarity Advanced	2x 1100W Platinum	3-year	11/17	
7X69SG0C00	ThinkSystem SR860	China	2x Xeon Gold 5120 14C/2.2GHz/19.25MB/105W/DDR4-2400	4x 16GB RDIMM DDR4-2666	730-8i 1GB	8x 2.5" SATA/SAS HS	Open	None	4xGbE RJ-45 LOM	2xPCIe x16 LP, 4x PCIe x8 LP	USB 2.0	XClarity Advanced	2x 1100W Platinum	3-year	11/17	

Model	Product	Region	Processor	Memory	Storage Controller	Disk Bays	Disks	M.2 Drives	Networking (LOM/ML2/PCIe)	Available PCIe Slots	Front Panel	Front USB	System Management	Power Supply	Warranty	Ann Date (mm/yy)
7X69A001EA	ThinkSystem SR860	EMEA	4x Xeon Gold 6130 16C/2.1GHz/22MB/125W/DDR4-2666	4x 32GB RDIMM DDR4-2666	930-8i 2GB flash	8x2.5" HS (4 SATA/SAS, 4 AnyBay)	Open	None	None	4x PCIe x8 LP, 3x PCIe x8 FHHL, 2x PCIe x16 FHFL	Pull-out LCD	USB 3.0	XClarity Enterprise	2x 2000W Platinum	3-year	11/17
7X69A002EA	ThinkSystem SR860	EMEA	4x Xeon Gold 5118 12C/2.3GHz/16.5MB/105W/DDR4-2400	4x 32GB RDIMM DDR4-2666	930-8i 2GB flash	8x2.5" HS (4 SATA/SAS, 4 AnyBay)	Open	None	None	4x PCIe x8 LP, 3x PCIe x8 FHHL, 2x PCIe x16 FHFL	Pull-out LCD	USB 3.0	XClarity Enterprise	2x 2000W Platinum	3-year	11/17