ThinkSystem SR590 7X99A02HNA

Region
NA

Machine Type
7X99

TopSeller
No

Processor
1x Xeon Gold 5118
12C/2.3GHz/16.5MB/105W/DDR4-2400

Memory
1x 16GB RDIMM DDR4-2666

Storage Controller
1x 930-8i 2GB Flash

Disk Bays
8x 2.5" SATA/SAS HS

Disks
Open

M.2 Drives
None

Networking (LOM/ML2/PCIe)
None

Available PCIe Slots
4x PCIe x8

Front VGA
None

System Management
XClarity Standard

Power Supply
1x 750W Platinum

Warranty
3-year

Ann Date (mm/yy)
11/17

Note:
Country Code "US" is for United States, "++" is for EMEA countries (e.g. AD - Saudi, Arabia, AT - Austria, BM - Bulgaria, etc.), "xx" is for EAST countries (e.g. BM - Bulgaria, CX - Hungary, CY - Cyprus, etc.), and "**" is for MEA countries (e.g. AD - Saudi, Arabia, ED - Egypt, EQ - Sweden, etc.). Please be aware that the EMEA/ EAST/MEA models listed above might not be available in all countries

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ThinkSystem SR590 Platform Specifications

Components	Specification
Form factor	2U rack
Dimensions	Height: 86.5 mm (3.4 in). Width: 482 mm (19.0 in) with rack latches. Depth: 763.7 mm (30.1 in)
Weight	Maximum configuration: 61.7 lb (28 kg)
Processor	Up to two 150W Intel Xeon Scalable family processors, Bronze, Silver, Gold, or Platinum. Up to 26 cores at 2.0GHz, up to 3.6GHz with 4 cores. Two processors are connected with two UPI (Ultra Path Interconnect) links up to 10.4GT/s each
Chipset	Intel C622 Platform Controller Hub
Memory	Up to 16 DIMM sockets. Each processor supports up to 8 DIMM sockets with 6 channels. DDR4-2666. RDIMMs and LRDIMMs are supported, but memory types cannot be intermixed
Memory capacity	With RDIMMs: Up to 512GB with 16 x 32 GB RDIMMs and two processors With LRDIMMs: Up to 1TB with 16 x 64 GB LRDIMMs and two processors
Memory protection	ECC, memory mirroring, and memory sparing
Storage controllers	Supports the following RAID/HBA adapters:

	RAID adapter	Interface	Drive type	RAID levels	JBOD	Cache	Cache protection	FastPath	Max qty
For SS bays	Onboard SATA	6Gb SATA	SATA	0/1/10/5	Yes	None	None	No	-
For HS bays	530-8i	12Gbs SAS	SATA/SAS	0/1/10/5/50	Yes	None	None	Yes	2
	730-8i	12Gbs SAS	SATA/SAS	0/1/10/5/50	Yes	1GB	None	No	2
	930-8i	12Gbs SAS	SATA/SAS	0/1/10/5/50/6/60	Yes	2GB	Flash backup	Yes	2
	930-16i	12Gbs SAS	SATA/SAS	0/1/10/5/50/6/60	Yes	4GB	Flash backup	Yes	1
	430-8i	12Gbs SAS	SATA/SAS	-	Yes	None	None	-	2
	430-16i	12Gbs SAS	SATA/SAS	-	Yes	None	None	-	1
	430-8e	12Gbs SAS	SATA/SAS	-	Yes	None	None	-	5
	430-16e	12Gbs SAS	SATA/SAS	-	Yes	None	None	-	5
	930-8e	12Gbs SAS	SATA/SAS	0/1/10/5/50/6/60	Yes	4GB	Flash backup	Yes	3

Note: 730-8i is available in China only

Disk drive bays	Supports 3.5" Simple-swap bay up to 8, or 3.5" HS bay up to 12, or 2.5" HS bay up to 12. On 12x 3.5", 8x 2.5", or 16x 2.5" bay models, 4 bays can be upgrade to AnyBay. Optional 2 rear 3.5" HS bays are supported on 12 x 3.5" model, takes place in riser card 1 location. Optional one or two internal M.2 SSD for boot, dual M.2 SSD supports mirroring

Internal storage		
For 3.5" SS bay	3.5" HDD, SATA6Gbs, 7.2K	1TB/2TB/4TB/6TB/8TB
For 3.5" bay (3.5" disks or 2.5" disks with 3.5" tray)	3.5" HDD, SATA6Gbs, 7.2K	1TB/2TB/4TB/6TB/8TB/10TB
	3.5" HDD, SAS12Gbs, 7.2K	1TB/2TB/4TB/6TB/10TB
	3.5" HDD, SAS12Gbs, 15K	300GB/600GB/900GB
	2.5" SSD, SATA6Gbs	240GB/480GB
	2.5" NVMe SSD, AnyBay	960GB/1.92TB/3.84TB
For 2.5" bay	2.5" HDD, SATA6Gbs, 7.2K	1TB/2TB
	2.5" HDD, SAS12Gbs, 7.2K	1TB/2TB
	2.5" HDD, SAS12Gbs, 10K	300GB/600GB/900GB/1.2TB/1.8TB
	2.5" HDD, SAS12Gbs, 10K, SED	300GB/600GB
	2.5" HDD, SAS12Gbs, 15K	300GB/600GB/900GB
	2.5" SSD, SAS12Gbs	400GB/800GB/3.84TB
	2.5" SSD, SATA6Gbs	240GB/480GB
	2.5" NVMe SSD, AnyBay	960GB/1.6TB/1.92TB/3.84TB
M.2 boot drive	M.2 SATA SSD	32GB/128GB

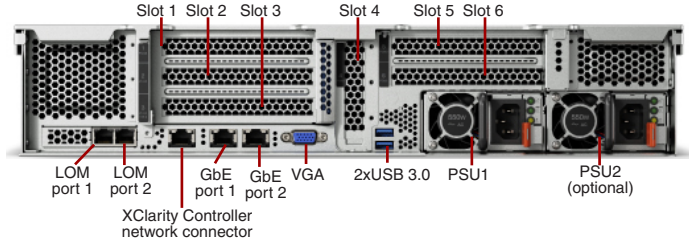
Optical	No internal optical bay. Using USB DVD±RW optical drive
Network interfaces	Integrated one dedicated management port plus two GbE ports. One LOM slot for customized LOM with two RJ-45 or SFP+ ports, up to 10GbE. Optional ML2 or PCIe adapters are supported. ML2 adapter requires riser card with ML2 slot. Up to two ports supports Wake-on-LAN and NC-SI (see right)
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 7.3/6.9. SUSE Linux Enterprise Server 12 SP2/11 SP4. VMware ESXi 6.5/6.0 U3
Systems management	XClarity Controller Standard, optional upgrades to Advanced or Enterprise are available. Energy Manager. XClarity Administrator. Lenovo Capacity Planner. Provisioning Manager. Essentials. Light Path Diagnostics
GPU support	None
Base warranty	MT 7X98: 1-year limited onsite service with 9x5/NBD MT 7X99: 3-year limited onsite service with 9x5/NBD

Components	Specification
Power supply	Up to two redundant hot-swap 550W and 750W 80 PLUS Platinum qualified AC power supplies. Or up to two redundant hot-swap 750W Titanium qualified AC power supplies. 750W Titanium is 200V - 240V, others are 100V - 240V
Video	Integrated Matrox G200 in XClarity Controller
Cooling	Three fans (2+1) for single processor model, four fans (3+1) for dual processor model
Front ports	One XClarity Controller USB, one USB 3.0, one optional VGA
Rear ports	One VGA, two USB 3.0, two ethernet (RJ-45), one XClarity Controller connector. Optional COM port
Environmental specification	Supports ASHRAE A4 with limitations.

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%

Models should meet the following requirements to support A3 and A4:
- *Redundant power supplies required*
- *No system fan fails*
- *No NVMe drive*
- *No rear two HS bays*
- *Processor TDP is less than or equal to 140 watts, and no Intel Xeon 6140 or 6152 processor is installed*
- *On 12x 3.5" models. mo M.2 drives*

Environmental certification	Energy Star Server 2.1 certified. More environmental information please see: www.lenovo.com/social_responsibility/us/en/environment/



Note: GbE port 1 and LOM port 1 support Wake-on-LAN and NC-SI. Riser cards, expansion cards, and LOM adapters are optional.

Expansion slots

Slot 1-3 (riser card 1)	Supports one of the following for riser card 1: Option 1: PCIe 3.0 x8/x8/x8 (slot 1-3). Full height, half length. Option 2: PCIe 3.0 x16/x8 (slot 1 and 3). Full height, half length Option 3: PCIe 3.0 x8/x8/x8 ML2 (slot 1-3). Full height, half length Option 4: Two rear 3.5" disk bays, 12 x 3.5" models only
Slot 4 (onboard)	PCIe 3.0 x8, low profile
Slot 5 (riser card 2)	PCIe 3.0 x16, full height, half length, requires 2nd CPU
Slot 6 (riser card 2)	PCIe 3.0 x8, full height, half length

System unique options

7XH7A06253	ThinkSystem SR590/SR650 Rear HDD Kit
4XH7A08778	ThinkSystemSR550/SR590/SR650 x8/x8/x8ML2 PCIe FH Riser 1 Kit
4XH7A08779	ThinkSystem SR550/SR590/SR650 x16/x8 PCIe FH Riser 1 Kit
4XH7A08777	ThinkSystem SR550/SR590/SR650 x8/x8/x8 PCIe FH Riser 1 Kit
4XH7A08780	ThinkSystemSR550/SR590/SR650 x16/x8(or x16) PCIe FH Riser 2 Kit
7Z17A02578	ThinkSystem SR550/SR590/SR650 EIA Latch w/ VGA Upgrade Kit
7Z17A02580	ThinkSystem 2U Security Bezel
7Z17A02577	ThinkSystem COM Port Upgrade Kit
4XH7A08764	ThinkSystem SR590 2.5"" Anybay 8-Bay Backplane Kit
4XH7A08763	ThinkSystem SR590 2.5" SATA/SAS 8-Bay Backplane Kit

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