



➞ ThinkSystem SN550 features and specifications

Product features, technical specifications



Features and specifications



Click each number to
see specifications



Features and specifications

Features	SN550
Processor	<ul style="list-style-type: none">Up to two Intel Xeon Processor Scalable Family of processors, either Platinum, Gold, Silver, or Bronze level (former codename "Skylake")Up to 28 cores, core speeds up to 3.6 GHz, L3 cache size up to 38.5 MB, and TDP ratings up to 165 WTwo Intel Ultra Path Interconnect (UPI) links up to 10.4 GT/s eachUp to 2666 MHz memory speed
Chipset	Intel C624 (former codename "Lewisburg")
Memory	<ul style="list-style-type: none">Six channels per CPU at 2 DIMMs per channel (DPC); 12 DIMMs per CPU24x DDR4 (RDIMM/LRDIMM) 2666 MHz DIMMsSupports 8 GB / 16 GB / 32 GB / 64 GB DIMMs
Memory maximums	<ul style="list-style-type: none">LRDIMMs: up to 1.5 TB with 24x 64 GB LRDIMMs and two processorsRDIMMs: up to 768 GB with 24x 32 GB RDIMMs and two processorsPlanned support for up to 3 TB with 24x 128 GB 3DS RDIMMs (requires two M-suffix processors that support greater than 786 GB memory per processor)
Memory protection	ECC, Single Device Data Correction (SDDC), memory mirroring, and memory sparing
Drive bays	<ul style="list-style-type: none">Up to 2x 2.5-inch Gen4 hot-swap SAS/SATA/SSD supportOptional support for 2.5-inch U.2 (NVMe) PCIe SSDsOptional support for up to two M.2 SSDs

Features and specifications

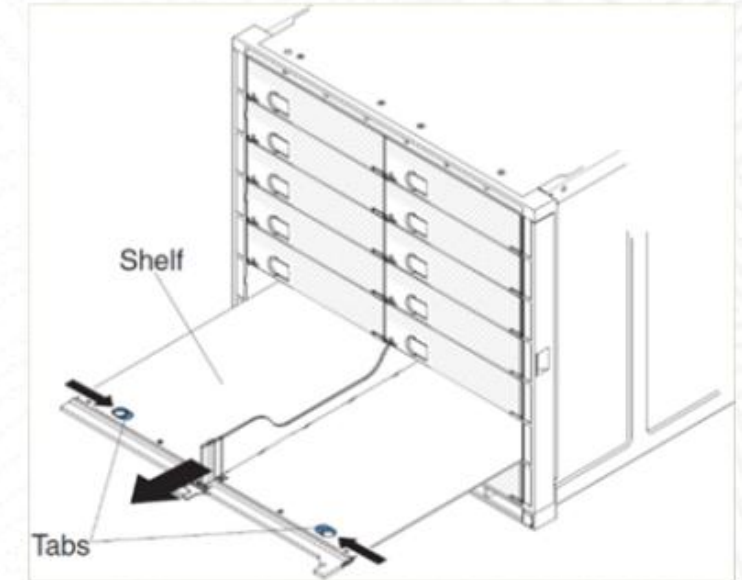
Features	SN550
Maximum internal storage	<ul style="list-style-type: none">• With two 2.5-inch hot-swap drives: Up to 15.2 TB using 2x 7.6 TB 2.5-inch SAS SSDs or up to 4 TB using 2x 2 TB NL SAS HDDs• With two 2.5-inch U.2 (NVMe) SSDs: Up to 7.68 TB using 2x 3.84 TB PCIe 2.5-inch SSDs• With two internal non-hot-swap M.2: Up to 256 GB using 2x 128 GB SATA SSDs No support for the Flex System Storage Expansion Node
RAID support	<ul style="list-style-type: none">• Intel 6 Gb Software RAID 0/1 (provided by Intel RSTe)• Optional 12 Gb Hardware RAID support
Network interfaces	Integrated Intel 4x 10 GbE LOM; optional 1 Gb, 10 GbE, or 40 GbE adapters
PCIe expansion slots	<ul style="list-style-type: none">• 2x PCIe 3.0 x16 slots No support for the Flex System PCIe Expansion Node
Ports	One USB 3.0 port and one console breakout cable port that provides local KVM and serial ports
Power and cooling	Provided by Lenovo Flex System Enterprise Chassis

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System management	<ul style="list-style-type: none">• Predictive Failure Analysis• Lenovo XClarity System Management• Lenovo XClarity Controller• Lenovo XClarity Provisioning Manager• Predictive Failure Analysis• Light path diagnostics panel• Lenovo Energy Manager• Chassis Management Module II

Chassis support

Chassis models	Description	Supports SN550
8721-HC1 based: 8721-A1x, LRx, DCx 8721-K1G, E1Y, E2Y	Lenovo Flex System Enterprise Chassis with CMM (68Y7030) standard	No
8721-HC2 based: 8721-ALx, DLx 8721-E3Y, E4Y	Lenovo Flex System Enterprise Chassis with CMM2 (00FJ669) standard	Yes
7385-DCx	Lenovo Flex System Carrier-Grade Chassis	No



Number of SN550 nodes supported with 2500 W power supplies

	2500 W power supplies installed			
SN550 TDP rating	N+1, N=5 6 power supplies	N+1, N=4 5 power supplies	N+1, N=3 4 power supplies	N+N, N=3 6 power supplies
70 W	14	14	14	14
85 W	14	14	14	14
105 W	14	14	14	14
125 W	14	14	13	14
130 W	14	14	12	13
140 W	14	14	12	13
150 W	14	14	12	12
165 W	14	14	11	12



Number of SN550 nodes supported with 2100 W power supplies

	2100 W power supplies installed			
SN550 TDP rating	N+1, N=5 6 power supplies	N+1, N=4 5 power supplies	N+1, N=3 4 power supplies	N+N, N=3 6 power supplies
70 W	14	14	11	11
85 W	14	14	11	11
105 W	14	14	11	11
125 W	14	14	11	11
130 W	14	13	11	11
140 W	14	13	11	11
150 W	14	12	11	11
165 W	14	12	11	11

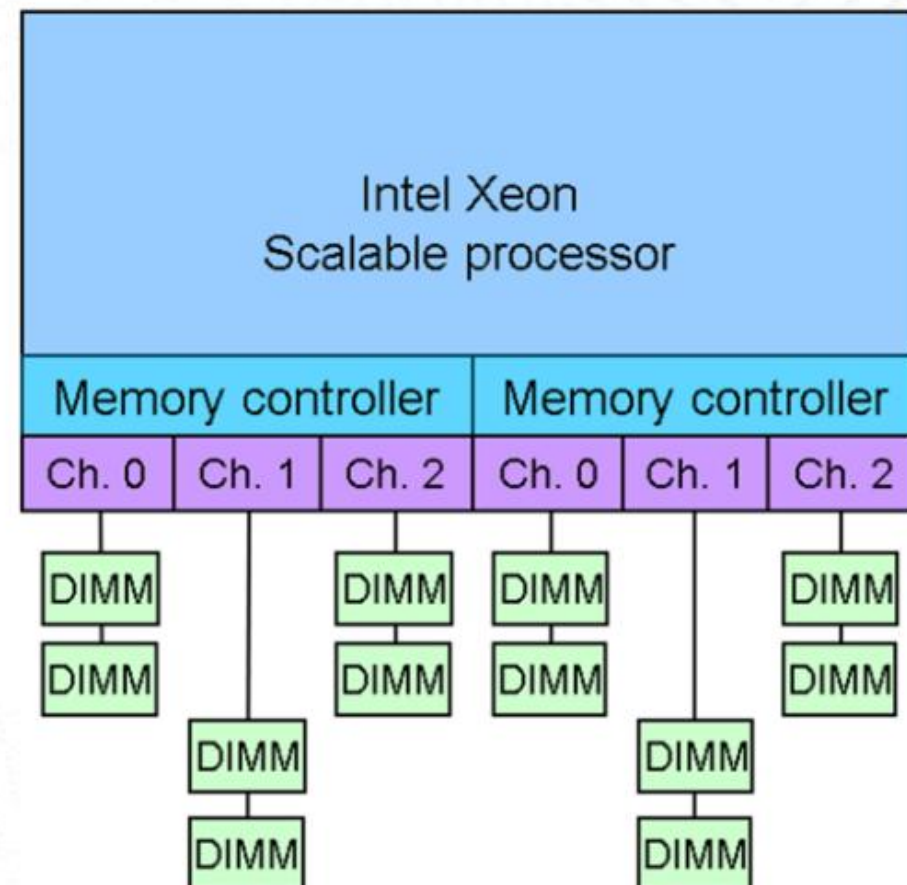


Memory speeds supported

- Each processor contains two integrated memory controllers (iMCs) with each controller providing three channels of DDR4; up to two DPC.
- All DIMMs in the server operate at the same speed up to 2666 MHz.
 - Actual speed is determined by the maximum memory speed supported by the processor that is installed.

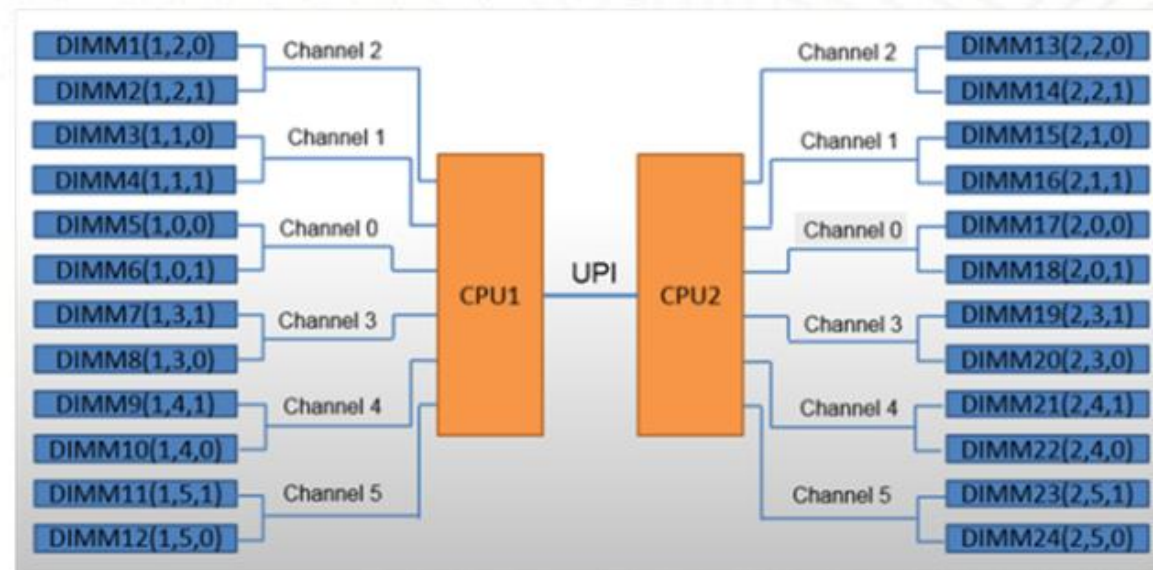
Important: Maximum memory speed can be achieved when maximum performance mode is enabled in UEFI.

Part number	Description
RDIMMs	
7X77A01301	ThinkSystem 8 GB TruDDR4 2666 MHz (1Rx8 1.2V) RDIMM
7X77A01302	ThinkSystem 16 GB TruDDR4 2666 MHz (1Rx4 1.2V) RDIMM
7X77A01303	ThinkSystem 16 GB TruDDR4 2666 MHz (2Rx8 1.2V) RDIMM
7X77A01304	ThinkSystem 32 GB TruDDR4 2666 MHz (2Rx4 1.2V) RDIMM
LRDIMMs	
7X77A01305	ThinkSystem 64 GB TruDDR4 2666 MHz (4Rx4 1.2V) LRDIMM



Memory types supported

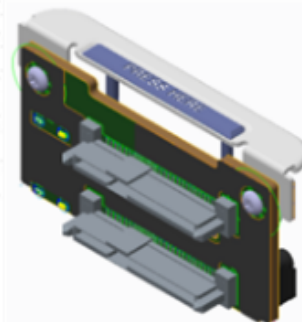
- Supports Lenovo TruDDR4 RDIMMs, LRDIMMs and 3DS RDIMMs (when available).
- Mixing RDIMMs, LRDIMMs, and 3DS RDIMMs is not supported.
- Mixing x4 and x8 DIMMs is supported.



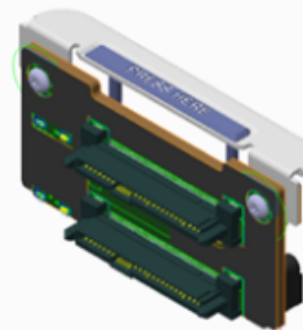
Processor	iMC	Memory channel	DIMM connectors	Processor	iMC	Memory channel	DIMM connectors
Processor 1	iMC0	Channel 0	5 and 6	Processor 2	iMC0	Channel 0	17 and 18
		Channel 1	3 and 4			Channel 1	15 and 16
		Channel 2	1 and 2			Channel 2	13 and 14
	iMC1	Channel 3	7 and 8		iMC1	Channel 3	19 and 20
		Channel 4	9 and 10			Channel 4	21 and 22
		Channel 5	11 and 12			Channel 5	23 and 24

Storage features

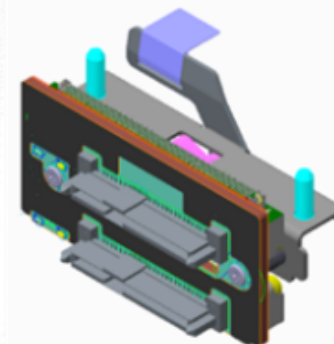
- Three backplanes available supporting:
 - SATA HDD/SSD (default)
 - NVMe/SATA
 - SATA/SAS (included with RAID kit options)
- Optional RAID adapters
 - Lenovo ThinkSystem RAID 530-4i
 - Entry level HW RAID
 - Cacheless
 - Fully Featured (No Features on Demand (FoD) upgrades)
 - Lenovo ThinkSystem RAID 930-4i-2 GB
 - Advanced RAID
 - 2 GB cache
 - Fully Featured
- Optional support for two M.2 form-factor SATA drives:
 - Dedicated slot on system board
 - Used as OS boot or hypervisor solution
 - Configured as RAID 1 mirrored pair for redundancy



SATA HDD/SSD backplane (default)



NVMe/SATA backplane



SAS/SATA backplane



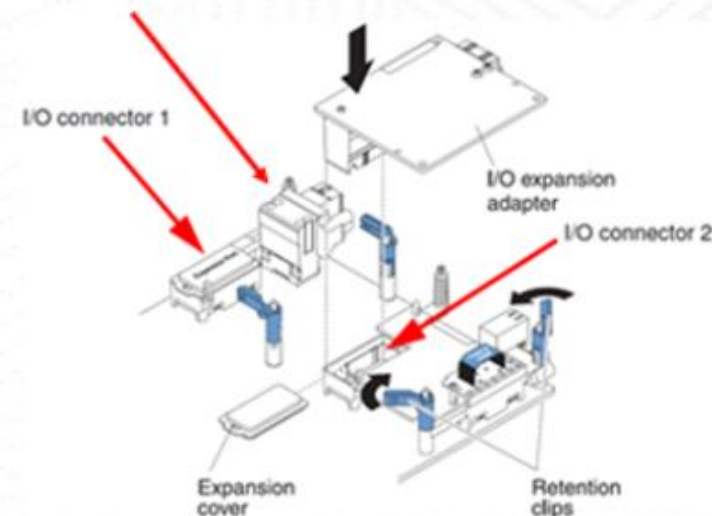
Dual M.2 boot adapter with one 128 GB M.2 drive partially installed (second M.2 drive is installed on other side of adapter).

Part number	Name and description
7M27A03918	Lenovo ThinkSystem RAID 530-4i 2 Drive Adapter Kit for SN550
7M27A03917	Lenovo ThinkSystem RAID 930-4i-2 GB 2 Drive Adapter Kit for SN550
7Y37A01093	ThinkSystem M.2 with Mirroring Enablement Kit

Networking features

- Integrated 4x 10 Gb Ethernet LAN on motherboard (LOM)
 - Connected to midplane using compute node fabric connector
 - Uses I/O connector 1
- All I/O adapters are the same form factor and can be used in any available slot
 - Must be consistent across all compute nodes and within the chassis
- Two PCIe 3.0 x16 slots are available supporting a variety of I/O expansion adapters

Location of fabric connector



Location of I/O connectors