ThinkSystem SR630 technical specifications

Technical specifications

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Specification	Description
Dimension	1U Height: 43.0 mm (1.7 inches) Width: With rack latches: 482.0 mm (19.0 inches), without rack latches: 434.4 mm (17.1 inches) Depth: 778.3 mm (30.7 inches) Note: The depth is measured with rack latches and power supply installed, but without security bezel installed.
Weight	Up to 19.0 kg (41.9 lbs)
Processor (depending on the model)	Up to two Intel® processors Designed for Land Grid Array (LGA) 3647 socket Scalable up to 28 cores Thermal Design Power (TDP): up to 205-watt **Notes:** For server models installed with Intel Xeon® 6144*, 6146*, 6154, 8168, 8180, and 8180M* processors (model numbers marked with * will be available later), the following parts are not supported: • Front hot-swap SAS/SATA/NVMe drives and front backplane • Rear hot-swap SAS/SATA drives • RAID super capacitor module on the bottom of the air baffle • NVMe PCIe flash adapter • GPU For a list of supported processors, see: http://www.lenovo.com/serverproven

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Specification	Description
DIMM	Minimum: 8 GB Maximum: • 768 GB using registered DIMMs (RDIMMs) • 1.5 TB using load-reduced DIMMs (LRDIMMs) • 3 TB using three-dimensional stack registered DIMMs (3DS RDIMMs) (available later)* Type: • PC4-21300 (DDR4-2666), operating speed depends on processor model and UEFI Operating Mode selection • Single-rank, dual-rank, quad-rank, or octa-rank (available later)* • RDIMM, LRDIMM, or 3DS RDIMM (available later)* Slots: 24 DIMM slots Supports (depending on the model): • 8 GB, 16 GB, and 32 GB RDIMMs • 64 GB LRDIMMs • 128 GB 3DS RDIMMs (available later)* * 128 GB 3DS RDIMM will be available later. For a list of supported DIMMs, see: http://www.lenovo.com/serverproven

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Specification	Description
Internal drives	Up to four 3.5-inch hot-swap SAS/SATA drives Up to eight 2.5-inch hot-swap SAS/SATA drives Up to ten 2.5-inch hot-swap SAS/SATA/NVMe drives (NVMe drives are supported only in drive bays 6–9) Up to two M.2 drives Up to two 2.5-inch hot-swap SAS/SATA drives in the rear (only for server models with 10 drive bays in the front and server models with processor TDP less than or equal to 125-watt). **Notes:** • NVMe drives means Non-Volatile Memory express drives. • For server models with rear hot-swap drive bays, NVMe drives are not supported (both in the rear drive bays or in the front drive bays).
PCIe slots	Depending on the model, your server supports up to three PCIe slots in the rear. For detailed information, see the "Rear view" section.
GPU	NVIDIA Quadro P2000 PCIe Active GPU Full-height, half-length PCIe adapter GPU TDP: 75-watt **Notes:** GPU is supported only when the following configuration requirements are met: • Processor TDP is less than or equal to 140-watt. No RAID adapter is installed on the RAID adapter slot on the system board. If you want to install a RAID adapter, install it in PCIe slot 1. • The power of the hot-swap power supplies is 750-watt or 1100-watt.

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Specification	Description
Input/Output (I/O) features	Front panel: • One VGA connector (available on some models) • One USB 2.0 connector • One USB 3.0 connector Rear panel: • One VGA connector • Two USB 3.0 connectors • One XClarity Controller network connector • Two or four Ethernet connectors on the LOM adapter (available on some models) • One serial port (available on some models)
RAID adapters (depending on the model)	A RAID 530-8i SAS/SATA adapter that supports JBOD mode and RAID levels 0, 1, 5, 10, and 50. A RAID 730-8i SAS/SATA adapter that supports JBOD mode and RAID levels 0, 1, 5, 10, and 50 (only available in China.) A RAID 930-8i or 930-16i SAS/SATA adapter that supports JBOD mode and RAID levels 0, 1, 5, 6, 10, 50, and 60. A RAID 930-8e SAS/SATA adapter that supports JBOD mode and RAID levels 0, 1, 5, 6, 10, 50, and 60.

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Specification	Description
System fans	One processor: five dual-rotor hot-swap fans (including one redundant fan rotor) Two processors: seven dual-rotor hot-swap fans (including one redundant fan rotor) **Notes:** • For server models installed with Intel Xeon 6144*, 6146*, 6154, 8168, 8180, and 8180M* processors (model numbers marked with * will be available later), fan rotor redundancy function is not supported. If one fan rotor fails, the server performance will be degraded. • If your server comes with only one processor, five system fans (fan 1 to fan 5) are adequate to provide proper cooling. However, you must keep the locations for fan 6 and fan 7 occupied by a fan filler to ensure proper airflow.
Power supplies	One or two hot-swap power supplies for redundancy support: • 550-watt ac 80 PLUS Platinum • 750-watt ac 80 PLUS Platinum • 750-watt ac 80 PLUS Titanium • 1100-watt ac 80 PLUS Platinum
Electrical input	Sine-wave input (50–60 Hz) required Input voltage low range: Minimum: 100 V ac and Maximum: 127 V ac Input voltage high range: Minimum: 200 V ac and Maximum: 240 V ac **Note:** For server models with 750-watt ac 80 PLUS Titanium power supplies, 100–127 V ac input voltage is not supported. **CAUTION:** 240 V dc input (input range: 180-300 V dc) is supported in China ONLY. Power supply with 240 V dc input cannot support hot plugging power cord function. Before removing the power supply with dc input, please turn off server or disconnect dc power sources at the breaker panel or by turning off the power source. Then, remove the power cord.

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Specification	Description

Environment	The server is supported in the following environment:
	Air temperature:
	• Operating:
	  • ASHRAE class A2: 10–35°C (50–95°F); when the altitude exceeds 900 m (2953 ft), the maximum ambient temperature value decreases by 1°C (1.8°F) with every 300 m (984 ft) of altitude increase.
	  • ASHRAE class A3: 5–40°C (41–104°F); when the altitude exceeds 900 m (2953 ft), the maximum ambient temperature value decreases by 1°C (1.8°F) with every 175 m (574 ft) of altitude increase.
	  • ASHRAE class A4: 5–45°C (41–113°F); when the altitude exceeds 900 m (2953 ft), the maximum ambient temperature value decreases by 1°C (1.8°F) with every 125 m (410 ft) of altitude increase.
	• Server off: 5–45°C (41–113°F)
	• Shipping or storage: -40–60°C (-40–140°F)
	• Maximum altitude: 3050 m (10 000 ft)
	• Relative humidity (non-condensing):
	  • Operating:
	  • ASHRAE class A2: 8%–80%; maximum dew point: 21°C (70°F)
	  • ASHRAE class A3: 8%–85%; maximum dew point: 24°C (75°F)
	  • ASHRAE class A4: 8%–90%; maximum dew point: 24°C (75°F)
	  • Shipping or storage: 8%–90%
	• Particulate contamination

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Specification	Description

Environment	**Attention:** Airborne particulates and reactive gases acting alone or in combination with other environmental factors such as humidity or temperature might pose a risk to the server.
	Note: Your server complies with ASHRAE class A2 specifications. The server performance might be impacted when the operating temperature is outside the ASHRAE A2 specifications. Depending on the hardware configuration, some server models comply with ASHRAE class A3 and class A4 specifications. To comply with ASHRAE class A3 and class A4 specifications, the server models must meet the following hardware configuration requirements at the same time:
	• Two power supplied are installed.
	• NVMe drive is not installed
	• NVMe PCIe flash adapter is not installed
	• GPU is not installed
	• For server models with 2.5-inch drive bays, the RAID super capacitor module cannot be installed on the bottom of the air baffle, but only can be installed on the chassis.
	• The following processors are not installed:
	  • Processors with TDP higher than or equal to 150-watt
	  • Intel Xeon 4112, 5122, 6126, 6128*, 6132*, 6134, 6134M*, and 8156 processors (model numbers marked with * will be available later)