

# ThinkSystem ST50 V2 system configurations and diagrams

Product features, technical specifications, and block diagram

The Lenovo logo is positioned in the top right corner of the slide. It consists of the word "Lenovo" in a white, sans-serif font, oriented vertically. The text is set against a rectangular background that features a vertical color gradient, transitioning from a light green at the top to a light blue at the bottom.

Lenovo

# ThinkSystem ST50 V2 features and specifications

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Features	ThinkSystem ST50 V2
Form factor	Tower, with an optional 4U rack-mount kit
Processor	<ul style="list-style-type: none"><li>One Intel® LGA 1151 Xeon-E or Pentium processor socket supporting processors with up to eight cores and a 95-watt TDP.</li></ul>
Chipset	Intel C256 chipset
Memory	<ul style="list-style-type: none"><li>Supports up to four DDR4 DIMM slots; 3200 MHz TruDDR4</li><li>Maximum memory 128 GB</li></ul>
Storage	<ul style="list-style-type: none"><li>Three drive bays supporting the following configurations:<ul style="list-style-type: none"><li>Bays 1 and 3 support 3.5-inch hard drives</li><li>Bay 2 supports a 2.5-inch hard drive</li></ul></li><li>One M.2 2280 NVMe module</li><li>One slim SATA ODD bay</li></ul>
GPU support (optional)	NVIDIA Quadro T1000 PCIe active GPU
RAID support	<ul style="list-style-type: none"><li>Intel VROC 6.0 software RAID support</li><li>Hardware RAID adapter options:</li></ul>

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Features	ThinkSystem ST50 V2
RAID support	<ul style="list-style-type: none"><li>• Intel VROC 6.0 software RAID support</li><li>• Hardware RAID adapter options:<ul style="list-style-type: none"><li>• ThinkSystem 4350-8i PCIe SAS/SATA 12 Gb Adapter</li><li>• ThinkSystem RAID 5350-8i PCIe SAS/SATA 12 Gb Adapter</li></ul></li></ul>
Network interface	One 1 GbE RJ45 Ethernet port at the rear
PCIe slots	<ul style="list-style-type: none"><li>• Slot 1: PCIe 4.0 x16</li><li>• Slot 2: PCIe 3.0 x1</li><li>• Slot 3: PCIe 3.0 x16 (four lanes)</li></ul>
Front I/O interface	<ul style="list-style-type: none"><li>• One USB 3.2 Gen 2 Type-C port, two USB 3.2 Gen 1 ports, and two USB 3.2 Gen 2 ports</li><li>• One combo audio line out (for Microsoft client OS only)</li></ul>
Rear I/O interface	<ul style="list-style-type: none"><li>• Four USB 3.2 Gen 1 ports</li><li>• Two Display Ports</li><li>• One serial port</li></ul>

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## Internal storage features

The ThinkSystem ST50 V2 supports SATA drives only and the following limited internal storage adapters:

- PCH – AHCI mode
- Intel VROC software RAID mode
- ThinkSystem 4350-8i SAS/SATA 12 Gb HBA
- ThinkSystem RAID 5350-8i PCIe 12 Gb Adapter

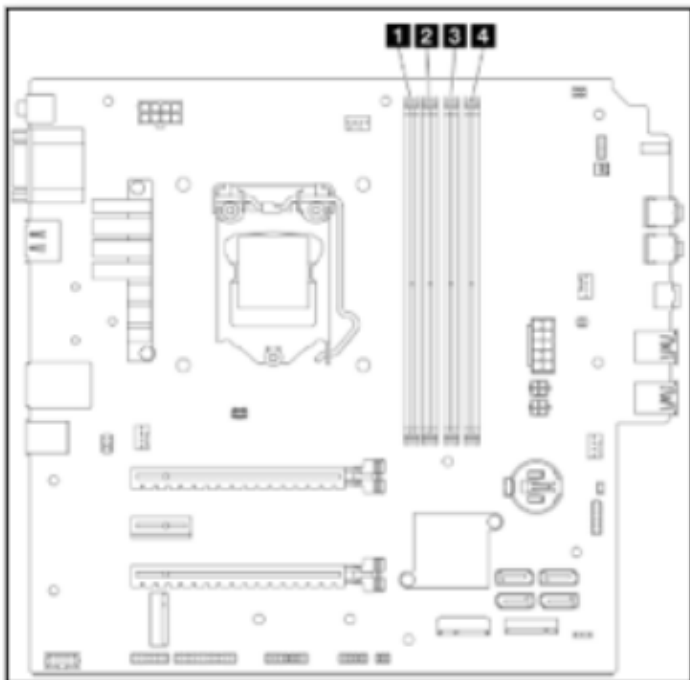
When drive bay 3 is selected, the rear system fan must be installed.

	Slot ID / Cable numbering		
	Drive bay 1	Drive bay 2	Drive bay 3
PCH – ACHI or VROC software RAID	1	2	3
Mini SAS to 4 SATA 7-pin cable	0	1	2
4350-8i no RAID configuration	1	2	3
5350-8i with RAID configuration	1	N/A	3

## Memory features

The ThinkSystem ST50 V2 memory installation rules are as follows:

- All installed DIMMs must be of the same memory type and capacity
- The ThinkSystem ST50 V2 supports memory speeds of up to 3200 MT/s – the figure will vary depending on the processor type
- Supported DIMMs installation sequence:

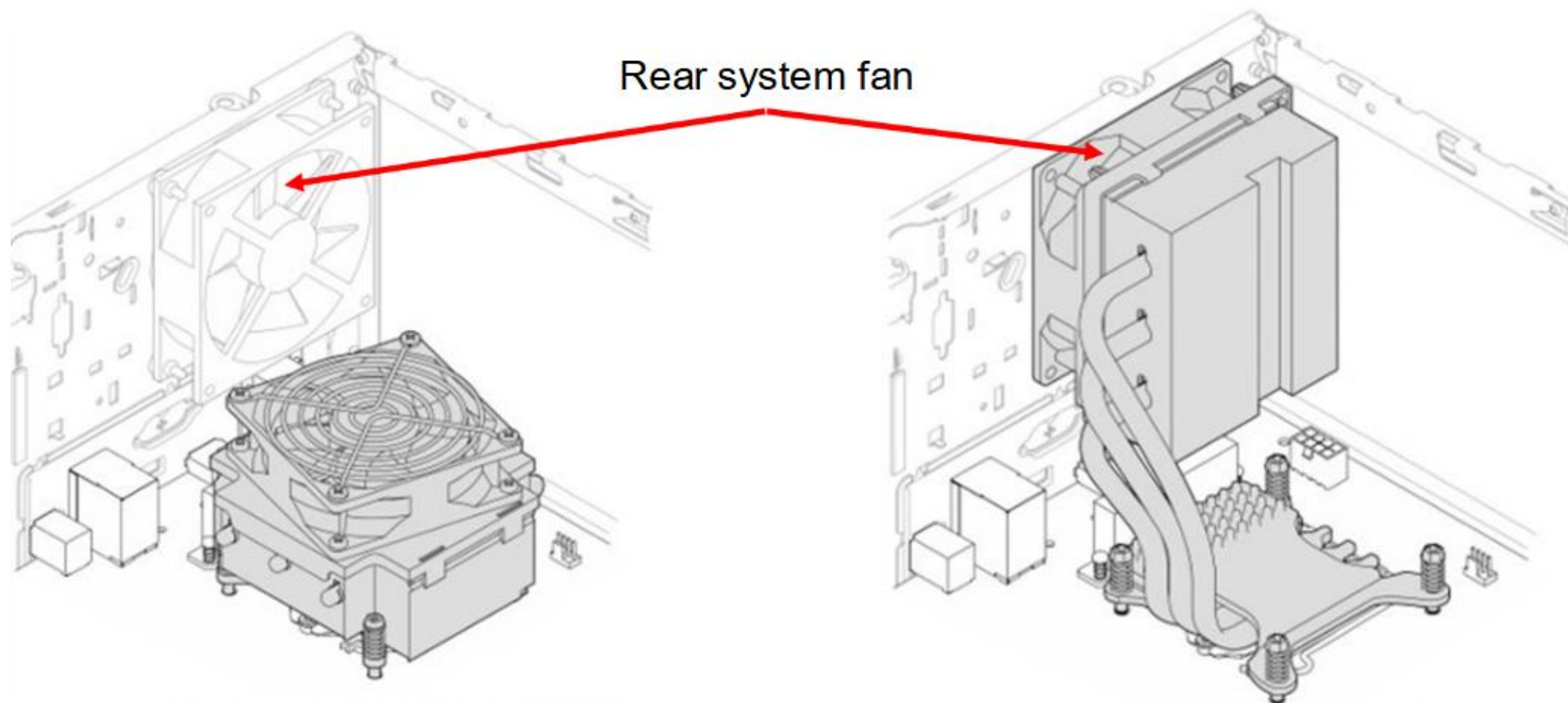


Total DIMMs	Memory Channel A		Memory Channel B	
	Slot 1	Slot 2	Slot 3	Slot 4
1	V			
2	V		V	
3	No support for three DIMMs			
4	V	V	V	V

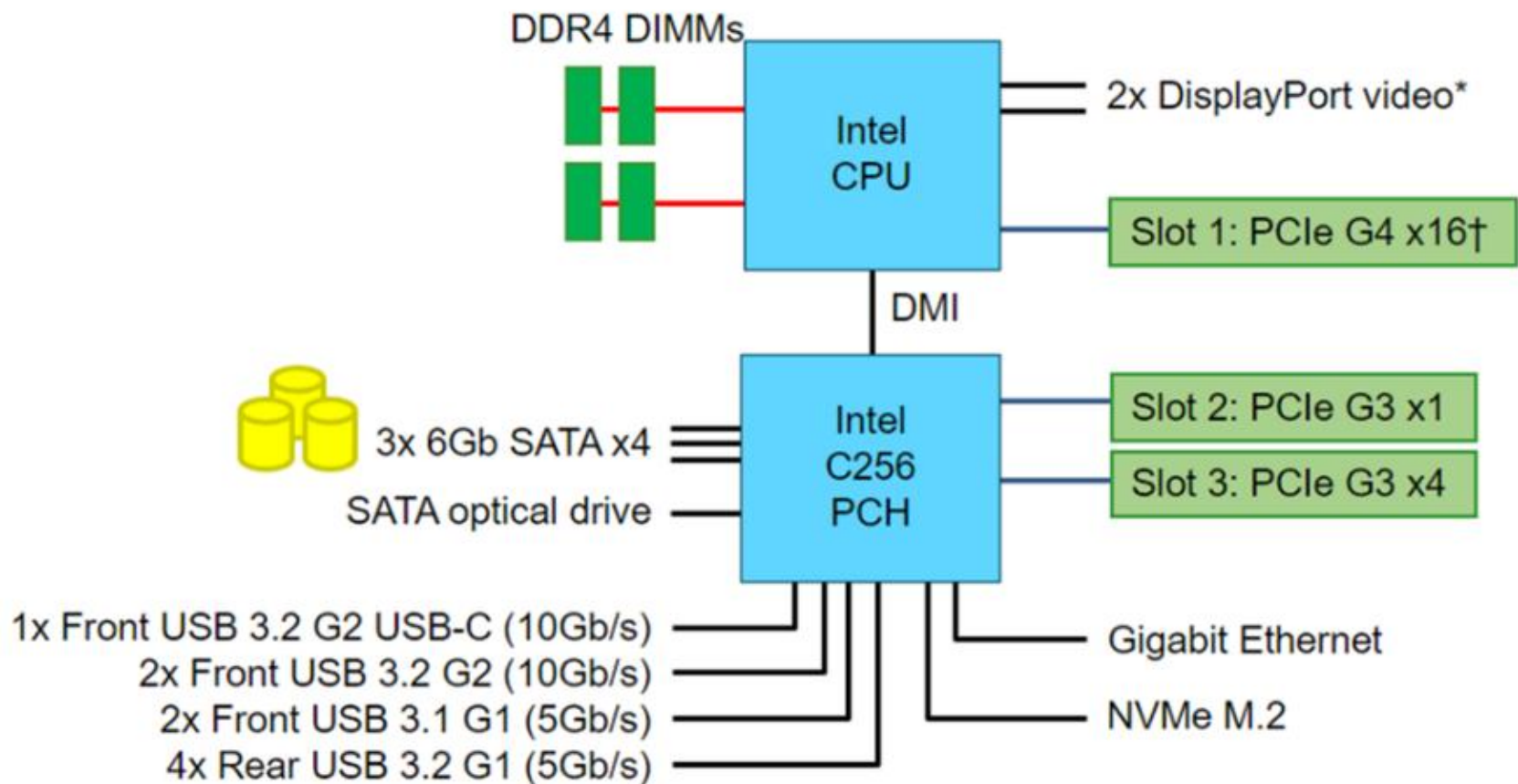


## Processor heat sink

The ThinkSystem ST50 V2 supports two types of heat sinks. If the processor has a TDP of more than 80 watts, the system will require a 95-watt heat sink. The 95-watt heat sink is installed on the processor and the rear side of the chassis.



# ThinkSystem ST50 V2 block diagram



\* Only processors with integrated graphics

† PCIe G3 x16 with a Pentium processor