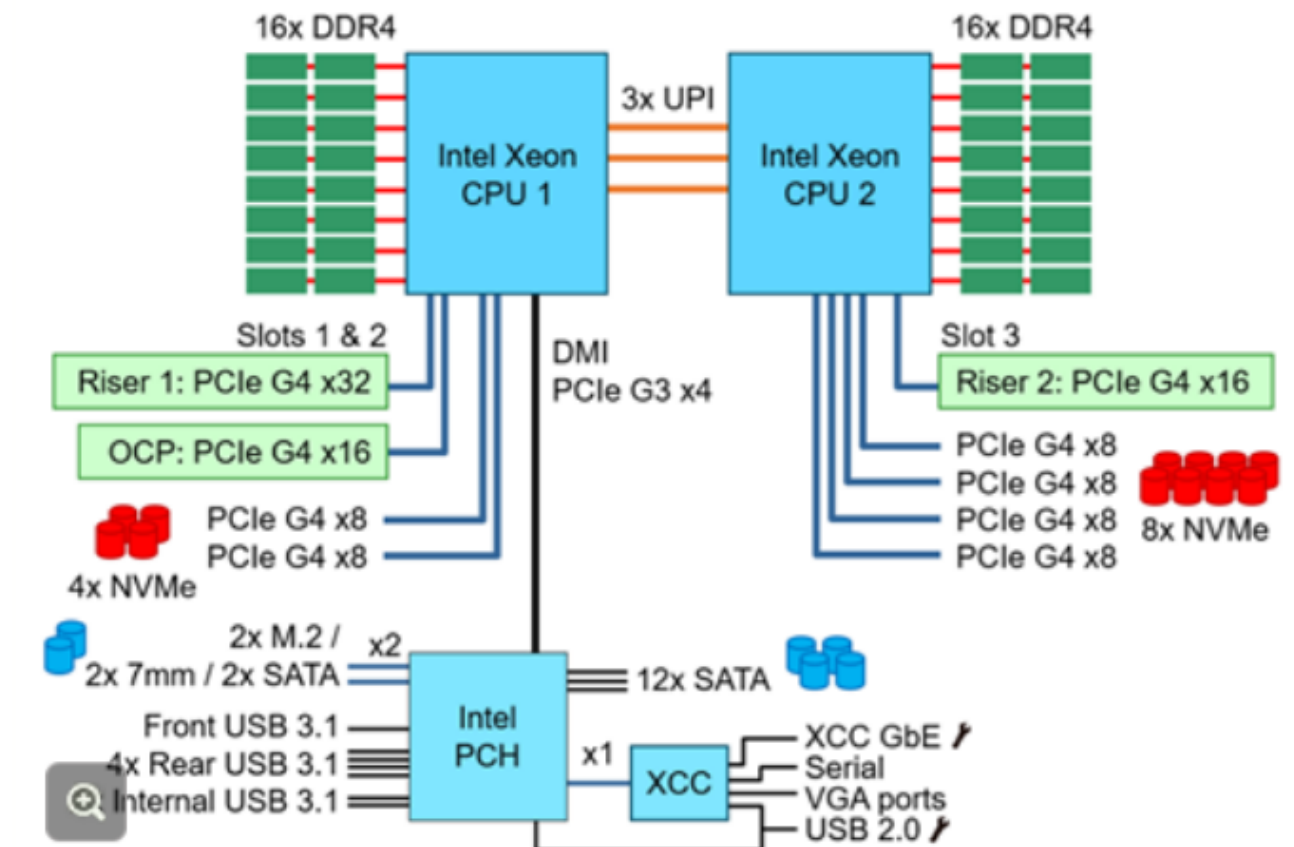# System configurations and diagrams

The SR630 V2 system block diagram and hardware configurations
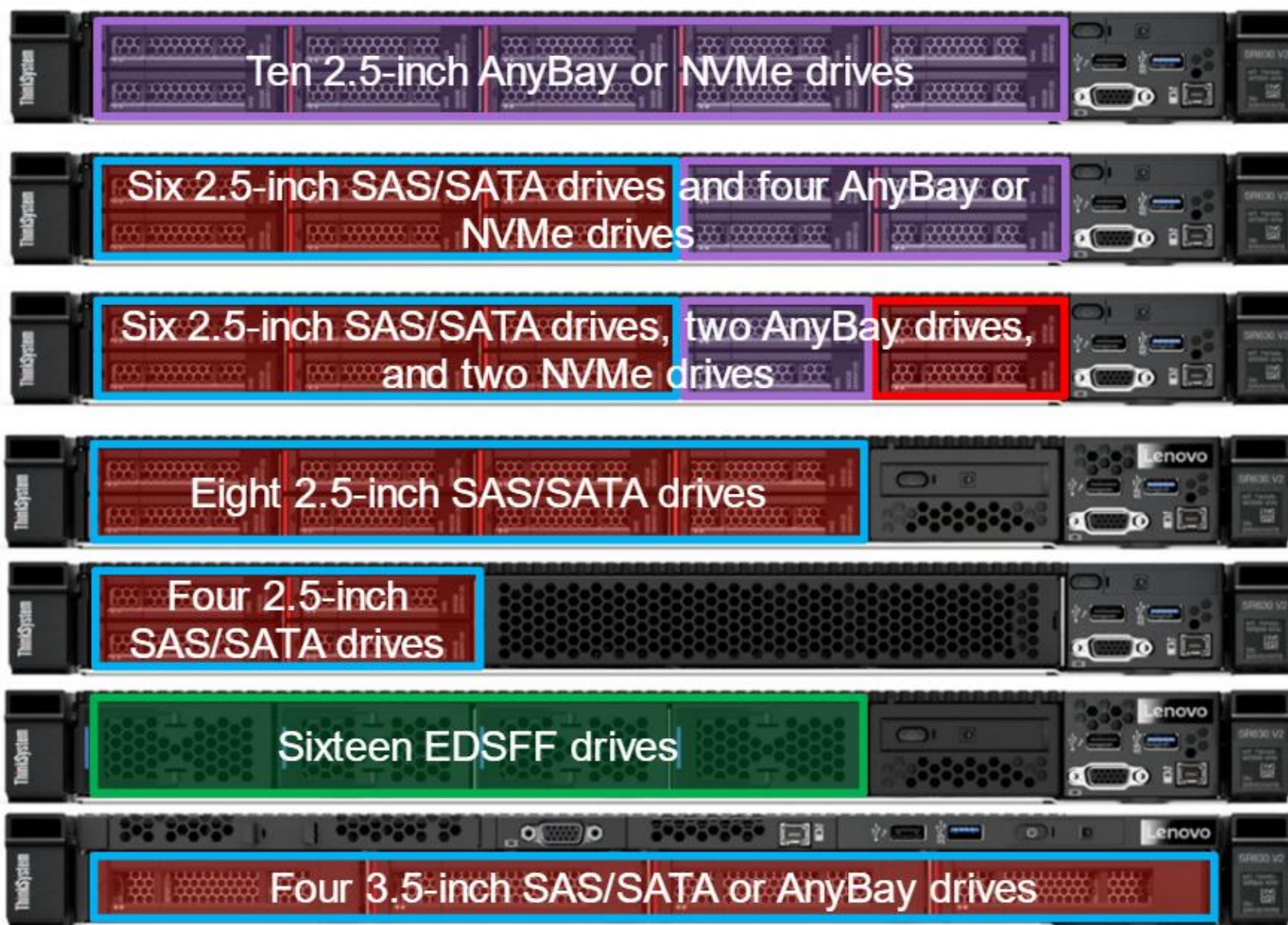
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SR630 V2 system block diagram

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Front drive bay configuration rules

The SR630 V2 front drive bay supports the following configurations:

- 2.5-inch drive bays
  - 10 2.5-inch hot-swap AnyBay or NVMe drives
  - Six 2.5-inch hot-swap SAS/SATA drives and four hot-swap AnyBay or NVMe drives
  - Six 2.5-inch hot-swap SAS/SATA drives, two hot-swap AnyBay drives, and two hot-swap NVMe drives
  - Four or eight 2.5-inch hot-swap SAS/SATA drives
- EDSFF drive bays
  - 16 EDSFF drives
- 3.5-inch drive bays
  - Four 3.5-inch SAS/SATA or AnyBay drives
- Up to two 7 mm or M.2 drives as boot drives
  Note: 7 mm drives and M.2 drives cannot both be installed at the same time
- Up to two RAID 1 M.2 drives for operating system boot functions

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Front drive bay configurations

Ten 2.5-inch AnyBay or NVMe drives

Six 2.5-inch SAS/SATA drives and four AnyBay or NVMe drives

Six 2.5-inch SAS/SATA drives, two AnyBay drives, and two NVMe drives

Eight 2.5-inch SAS/SATA drives

Four 2.5-inch SAS/SATA drives

Sixteen EDSFF drives

Four 3.5-inch SAS/SATA or AnyBay drives

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Rear drive bay configuration rules

The SR630 V2 rear drive bay supports the following configurations:
- Two 2.5-inch hot-swap SAS/SATA or NVMe drives
- Two 7 mm SAS/SATA or NVMe drives

Rear I/O expansion slot configuration rules

The SR630 V2 supports up to three PCIe 4.0 slots and a dedicated OCP 3.0 SFF slot for networking. Slot availability is based on riser selection. The use of slot 3 requires that both processors be installed.

- Slot 1: PCIe 4.0 x16 LP (CPU 1)
- Slot 2: PCIe 4.0 x16 LP or FHHL (CPU 1)
- Slot 3: PCIe 4.0 x16 LP (CPU 2)

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PCIe slot locations

Riser 1 (slots 1 and 2)   Riser 2 (slot 3)

Three x16 LP PCIe slots

Riser 1 (slots 1 and 2)

Two PCIe slots
- Slot 1: x16 LP
- Slot 2: x16 FHHL

Riser 1 (slot

One x16 LP PCIe slot

Riser 1 (slots 1 & 2)

Two x16 LP PCIe slots

Configuration limitations

Configuration limitations based on processor TDP

Component	TDP ≤ 205 watts	TDP ≤ 220 watts	TDP ≤ 250 watts	TDP ≤ 270 cwatts
Front 10 2.5-inch AnyBay backplane	Supported	Supported	Supported	Not supported
Front 10 2.5-inch NVMe backplane	Supported	Supported	Supported	Not supported
Front 16 EDSFF backplane	Supported	Supported	Supported	Not supported
Any other front backplane	Supported	Supported	Supported	Supported
GPUs with a four 2.5-inch backplane	Supported	Supported	Supported	Supported
GPUs with any other front backplanes	Supported	Supported	Not supported	Not supported
Rear 2.5-inch drives	Supported	Not supported	Not supported	Not supported

Note: For detailed memory configuration and installation rules, refer to the Technical rules section of the SR630 V2 Setup Guide.

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Memory options

The SR630 V2 uses Lenovo TruDDR4 memory and supports 16 DIMMs per processor. Each processor has eight memory channels with two DIMMs per channel. With 128 GB TruDDR4 memory and two processors installed, the server supports a total of 4 TB of system memory.

The SR630 V2 supports two memory modes:

- Independent memory mode
- Memory mirroring mode

The SR630 V2 also supports Intel Optane Persistent Memory (PMem). Two memory modes are supported with Persistent Memory:

- App Direct Mode
- Memory Mode

For more information about Intel Persistent Memory, refer to course ES51965 – Introducing the Intel Optane DC persistent memory module.

Note: For detailed memory configuration and installation rules, refer to the Memory module installation rules section of the SR630 V2 Setup Guide.

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Memory order

The following table indicates the organization of channels and DIMM slots around a processor.

Channel	F0	F1	E0	E1	H0	H1	G0	G1	C1	C0	D1	D0	A1	A0	B1	B0
Slot number	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17