

SD550 V3 product overview

Product description and front, rear, and inside views

Lenovo

Product overview

The ThinkSystem SD550 V3 is a 2U two-socket node server that can be installed in the 2U rack-mounted D3 chassis. The SD550 V3 supports up to two 5th Generation Intel Xeon Scalable processors (Intel code name: Emerald Rapids), 16 DDR5 DIMMs, and six 2.5-inch SSDs.

There are two SD550 V3 machine types:

- 7DD2: (three-year warranty)
- 7DD9: (one-year warranty)



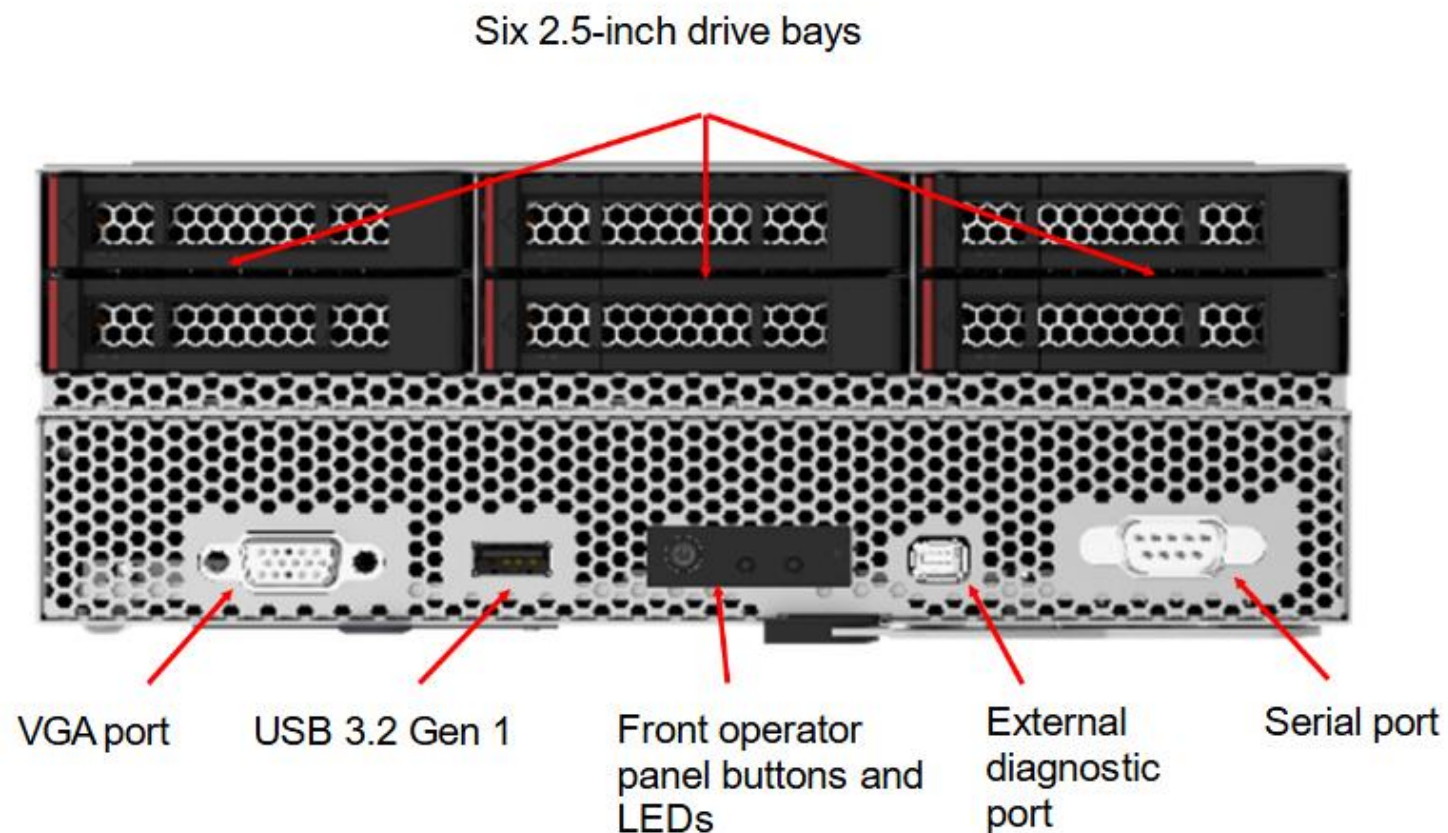
System specifications

Components	Specification
Machine type	7DD2, 7DD9
Form factor	Half-width, 2U compute node
Support chassis	2U D3 chassis – up to two SD550 V3 servers per chassis
Processor	One or two 5 th Generation Intel Xeon Scalable processors (code name: Emerald Rapids) Support for processors with up to 64 cores, core speeds of up to 3.9 GHz, and TDP ratings of up to 350 W
Chipset	Intel C741 “Emmitsburg” chipset
Memory	16 DIMM slots with two processors (eight DIMM slots per processor) per node - each processor has eight memory channels with one DIMM per channel (DPC) Lenovo TruDDR5 RDIMMs, 3DS RDIMMs, and 9x4 or 10x4 RDIMMs are supported – up to 5600 MHz
Memory maximum	Up to 2 TB per node with 16 128 GB 3DS RDIMMs
Disk drive bays	• Up to six hot-swap 2.5-inch SAS/SATA/NVMe drives • Up to two SATA/NVMe M.2 drives on system board
Storage controller	RAID adapter (support RAID 0, 1, 10, 5, 50) • ThinkSystem RAID 9350-8i 2GB Flash PCIe 12Gb Internal Adapter • ThinkSystem RAID 5350-8i PCIe 12Gb Internal Adapter Host bus adapter • ThinkSystem 440-16e SAS/SATA PCIe Gen4 12Gb HBA

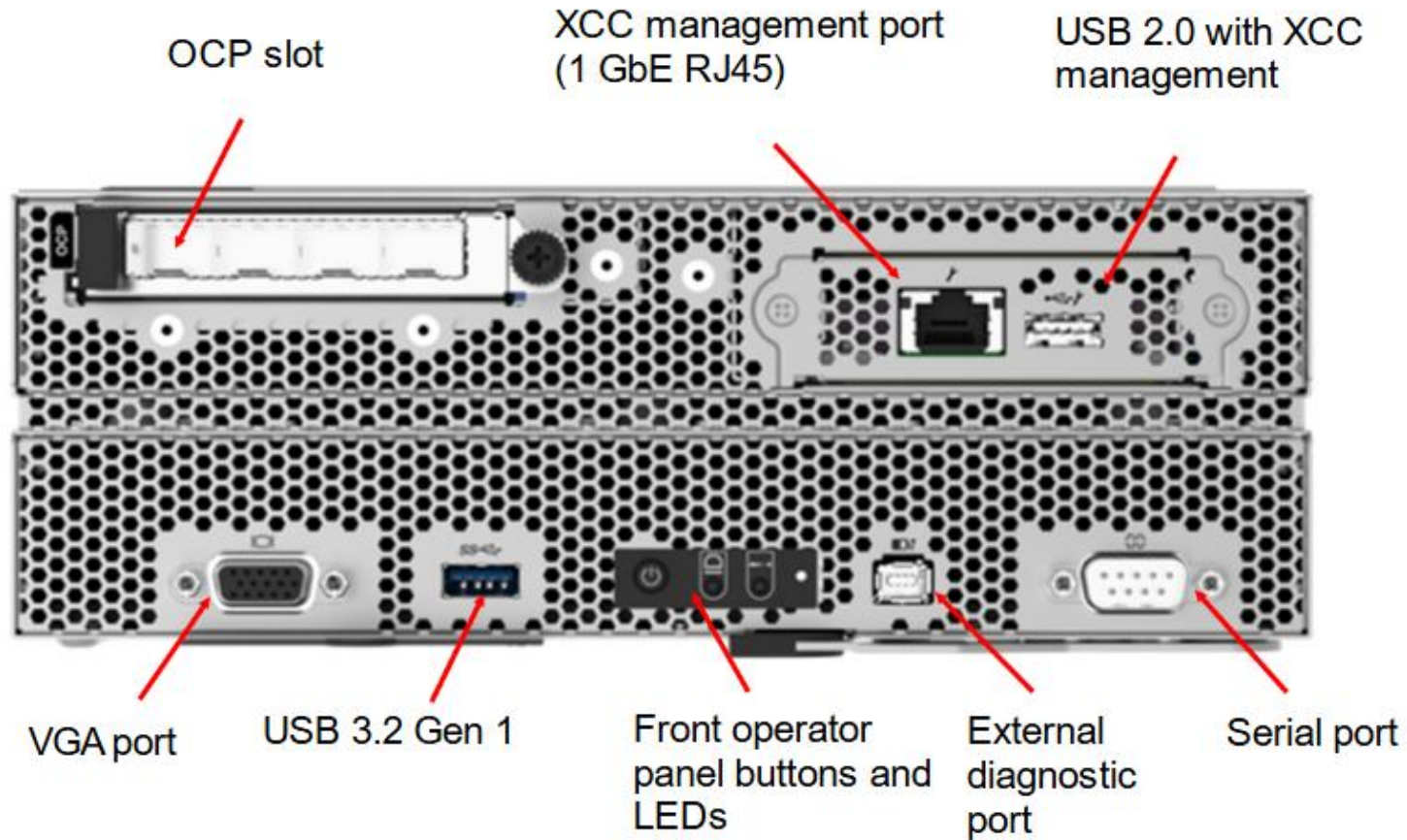
System specifications - continued

Components	Specification
PCI Expansion slots	One PCIe riser with two slots on the rear of the node: • PCIe 4.0 FHHL (single width) • PCIe 5.0 FHHL (single width) • Each PCIe expansion slot can support a 75 W PCIe adapter One OCP module slot
GPUs	Up to two low-profile GPU adapters (75 W)
Network	One OCP 3.0 slot with PCIe Gen 5 x16, supports two or four connectors on the OCP 3.0 module connected to CPU 1
Front I/O	Front 2.5-inch SSD configuration • 1x USB 3.2 Gen 1 port, 1x Serial port, 1x VGA Port, 1x External diagnostic port • FIO: Power button/LED, UID LED, Error LED, NMI button Front OCP configuration • A group of two or four Ethernet connectors on the OCP Ethernet adapter • One RJ-45 1 GbE port (XCC management), one USB 2.0 port (XCC management), one VGA port, one USB 3.2 Gen 1 port • One external diagnostics port, one serial port • FIO: Power button/LED, UID LED, Error LED, NMI button
Rear I/O	• One RJ-45 1 GbE port (XCC management), One USB 3.2 Gen 1 port, One USB 2.0 port (XCC management), one Mini DisplayPort • A group of two or four Ethernet connectors on OCP Ethernet adapter
System fan	Three 6056 fans (60 x 60 x 56 mm)
Management / TPM	Lenovo XClarity Controller 2 (XCC2), TPM 2.0

Front view – configuration with six 2.5-inch SSDs

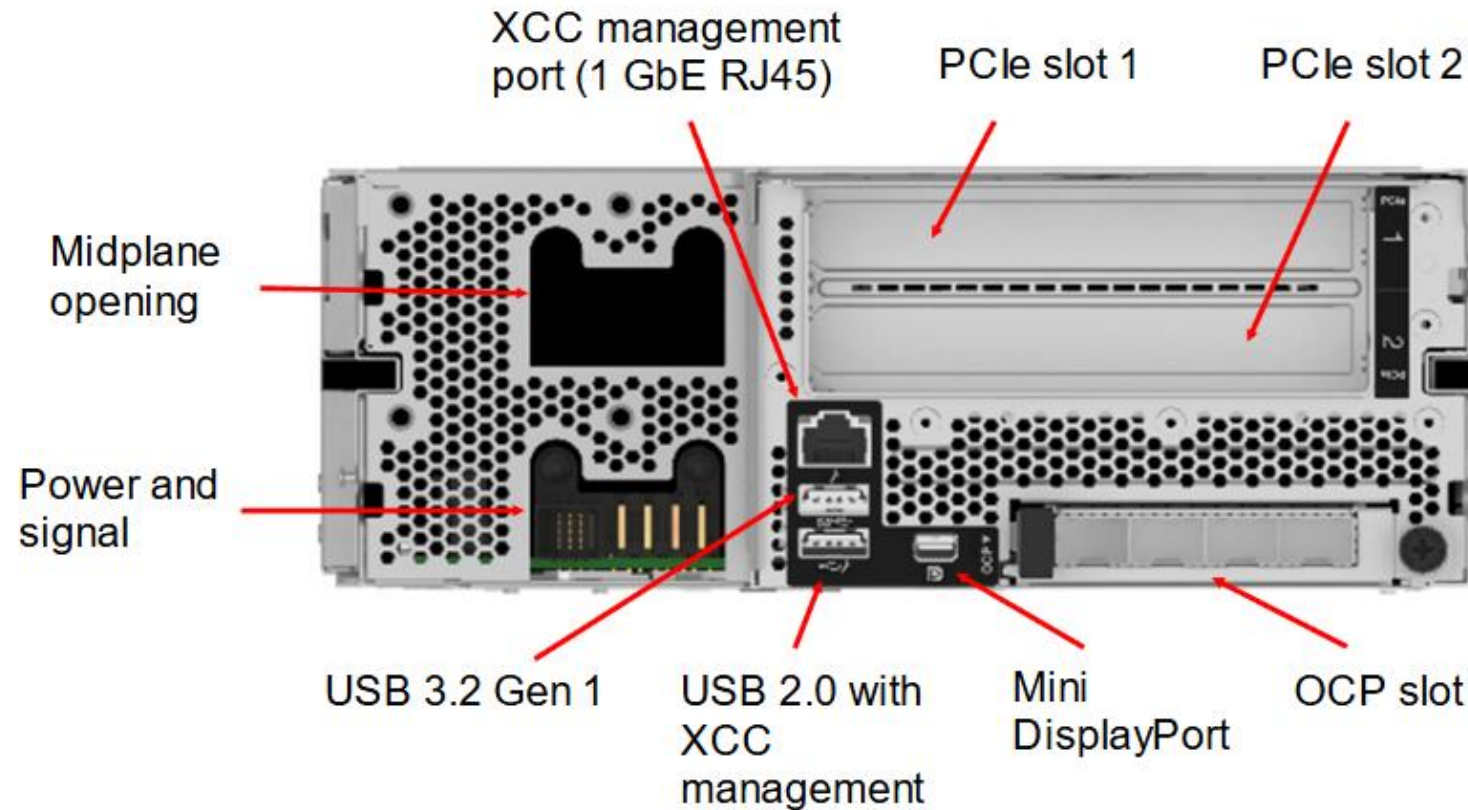


Front view – configuration with a front OCP module



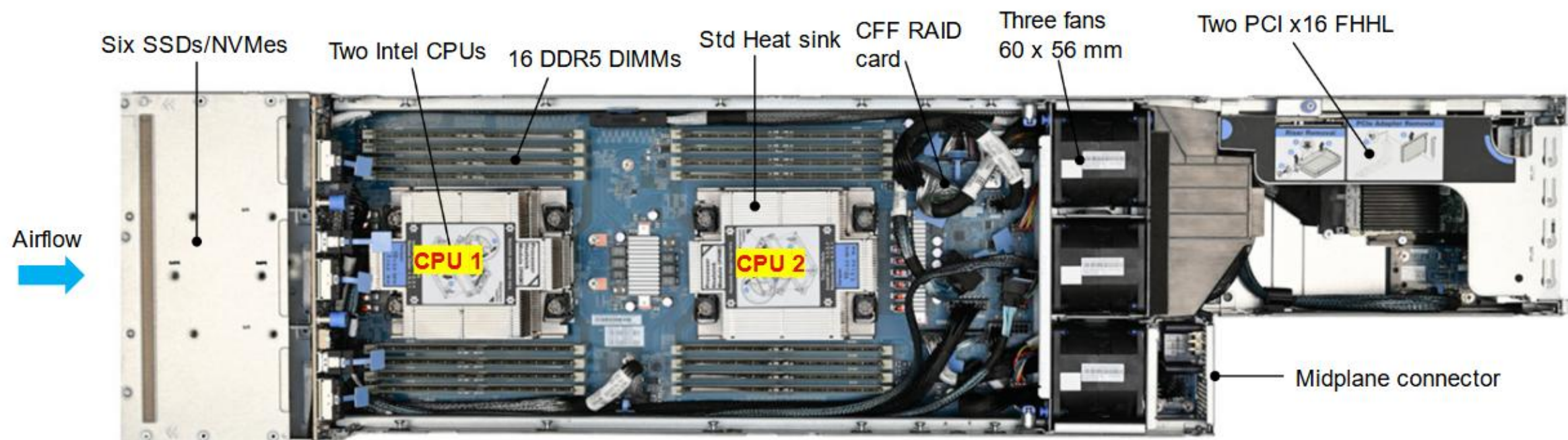
Rear view

Depending on the specific configuration, some of the components or connectors might not be supported.

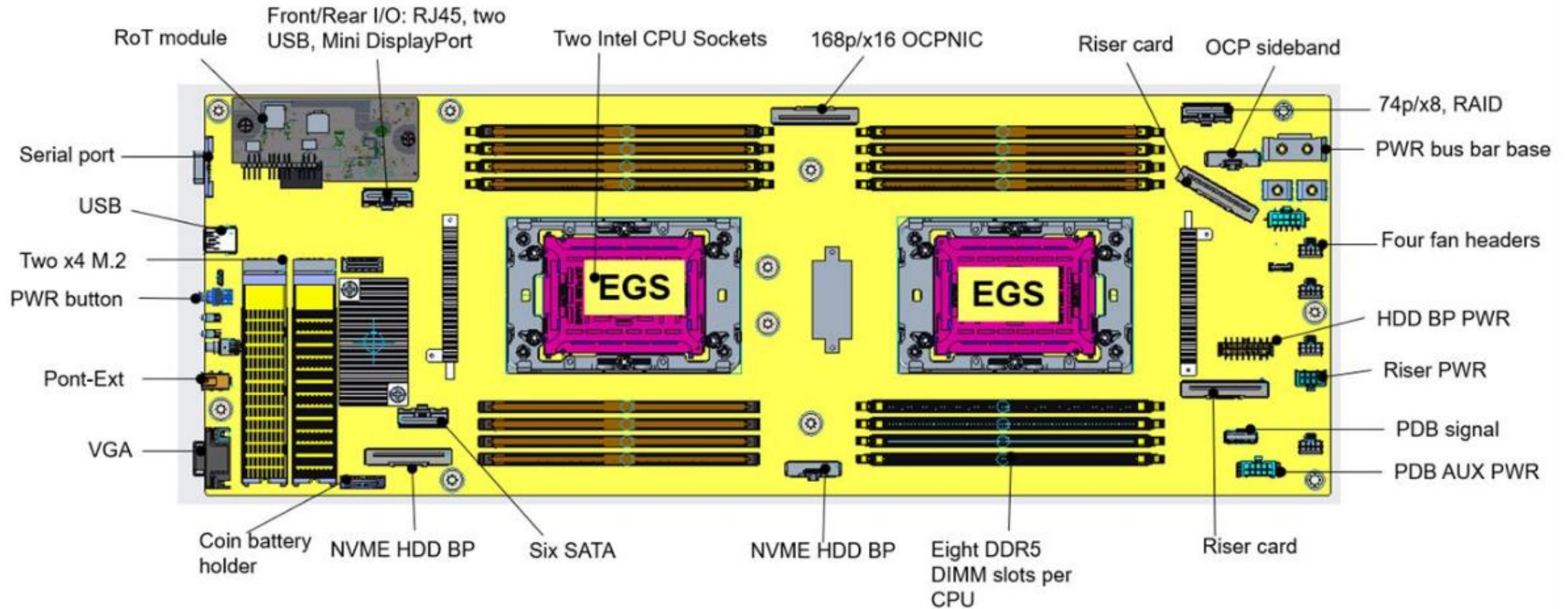


Top view

CPU2 supports two types of heat sink. If the TDP is more than 250 W, CPU2 should be equipped with a performance (Wing) heat sink.



System board connectors



Node components

Description	Description
1 Top cover	21 Firmware and RoT security module
2 PCIe riser filler	22 Node tray
3 PCIe riser	23 XCC management module
4 PCIe adapter	24 OCP 3.0 module
5 PCIe filler	25 Front OCP cage
6 GPU air duct	26 2.5-inch drive filler
7 Internal CFF RAID adapter	27 7 mm 2.5-inch drive
8 Internal adapter bracket	28 15 mm 2.5-inch drive
9 Power distribution board	29 2.5-inch drive cage
10 Rear I/O module	30 2.5-inch drive backplane
11 Power bus bar	31 Air baffle (front or rear)
12 Cable ducts	32 Fan cage
13 2U performance heat sink and processor carrier	33 Fan
14 Side brackets	34 Flash power module
15 2U standard heat sink and processor carrier	35 CMOS battery (CR2032)
16 Memory module	36 Screws
17 Processor	37 External diagnostics handset
18 M.2 drive	38 MicroSD card
19 M.2 drive retainer	39 Cables
20 System board	

