

ThinkSystem SR655 V3 overview

Product features, technical specifications

Lenovo

ThinkSystem SR655 V3 product overview

- The SR655 V3 is a 2U one-socket rack server that features the next-generation AMD EPYC 9004 Series processors (codename: Genoa). This high-performance server offers a broad selection of drive and slot configurations and an expansion for various IT workloads.

The SR655 V3 has two machine types:

- 7D9E (three-year warranty)
- 7D9F (one-year warranty)



Features and specifications

Attribute	Specifications
Form factor	2U rack mount
Processor	One AMD EPYC 9004 Series processor with an LGA6096 SP5 socket <ul style="list-style-type: none">• Up to 96 Zen4 cores (192 threads) per socket• Up to four GMI3 links at up to 32 GT/s• TDP of up to 320 W
Memory	12 DDR5 DIMM slots <ul style="list-style-type: none">• Support for RDIMMs and 3DS RDIMMs – up to 4800 MHz (1DPC)• Maximum memory: 1.5 TB (twelve 128 GB RDIMMs)
Storage	Up to 20 3.5-inch or 40 2.5-inch hot-swap drive bays <ul style="list-style-type: none">• Front bay can be 3.5-inch (eight or 12 bays) or 2.5-inch (eight, 16, or 24 bays)• Middle bay can be 3.5-inch (four bays) or 2.5-inch (eight bays)• Rear bay can be 3.5-inch (two or four bays) or 2.5-inch (four or eight bays)• Combinations of SAS/SATA, NVMe, or AnyBay (supporting SAS, SATA, or NVMe) are available Boot Drives: <ul style="list-style-type: none">• Two 7 mm drives at the rear• Internal M.2 module supporting up to two M.2 drives

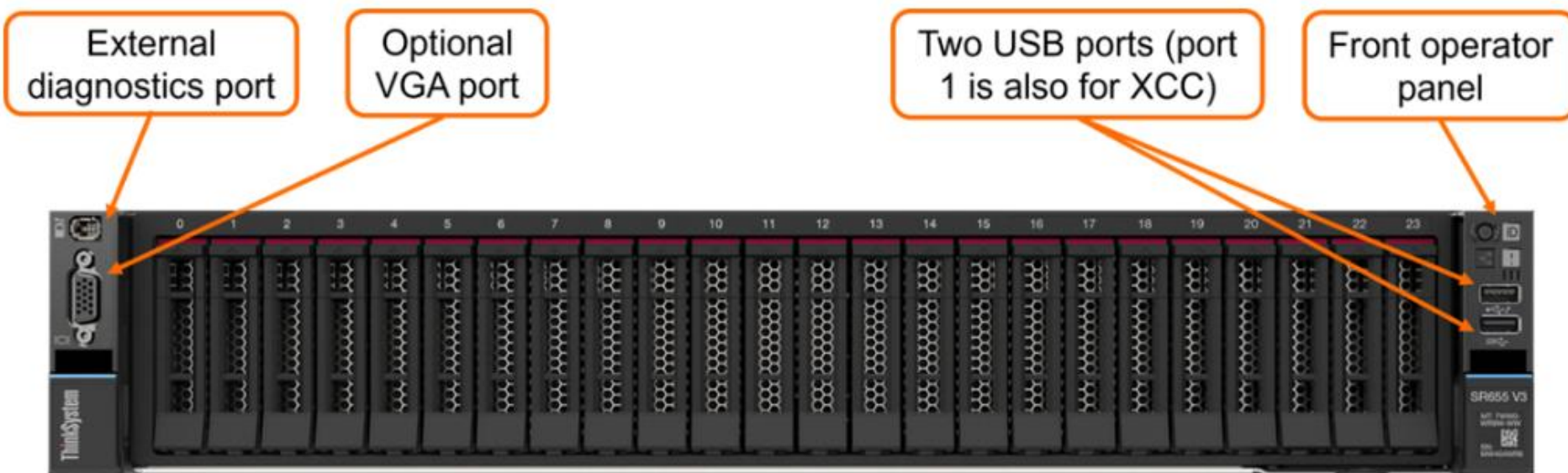
Features and specifications

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Storage controllers	<ul style="list-style-type: none">• Up to 16 onboard SATA ports (non-RAID)• NVMe Retimer Adapter (PCIe 4.0 or PCIe 5.0)• 12 Gb SAS/SATA RAID adapters with eight, 16, or 32 ports• 12 Gb SAS/SATA HBA (non-RAID) with eight or 16 ports
Network interface	<p>Dedicated OCP 3.0 SFF slot with PCIe 5.0 interface (rear-accessible)</p> <ul style="list-style-type: none">• One port can optionally be shared with the XClarity Controller 2 (XCC2) management processor for Wake-on-LAN and NC-SI support• Additional PCIe network adapters supported in the PCIe slots
I/O expansion slots	<ul style="list-style-type: none">• Up to 10 rear slots can support PCIe 4.0/5.0/CXL, supporting up to seven PCIe 5.0 slots• Up to six onboard NVMe connectors• Supported front-accessible PCIe slots: two PCIe 4.0 x16 slots plus a dedicated OCP 3.0 SFF slot (PCIe 4.0 x16) for networking
Cooling	<p>Supported fan types:</p> <ul style="list-style-type: none">• Standard fan 6038 (single-rotor, 17000 RPM)• Performance fan 6056 (dual-rotor, 21000 RPM)• Fan redundancy: N + 1 redundancy, one redundant fan rotor• Without riser 3: four hot-swap system fans (fan 6056 only, one redundant fan rotor)• With riser 3: six hot-swap system fans (one redundant fan rotor)

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Power supplies	Up to two hot-swap power supplies
Management interface	Lenovo XClarity Controller 2 (XCC2)

ThinkSystem SR655 V3 front views

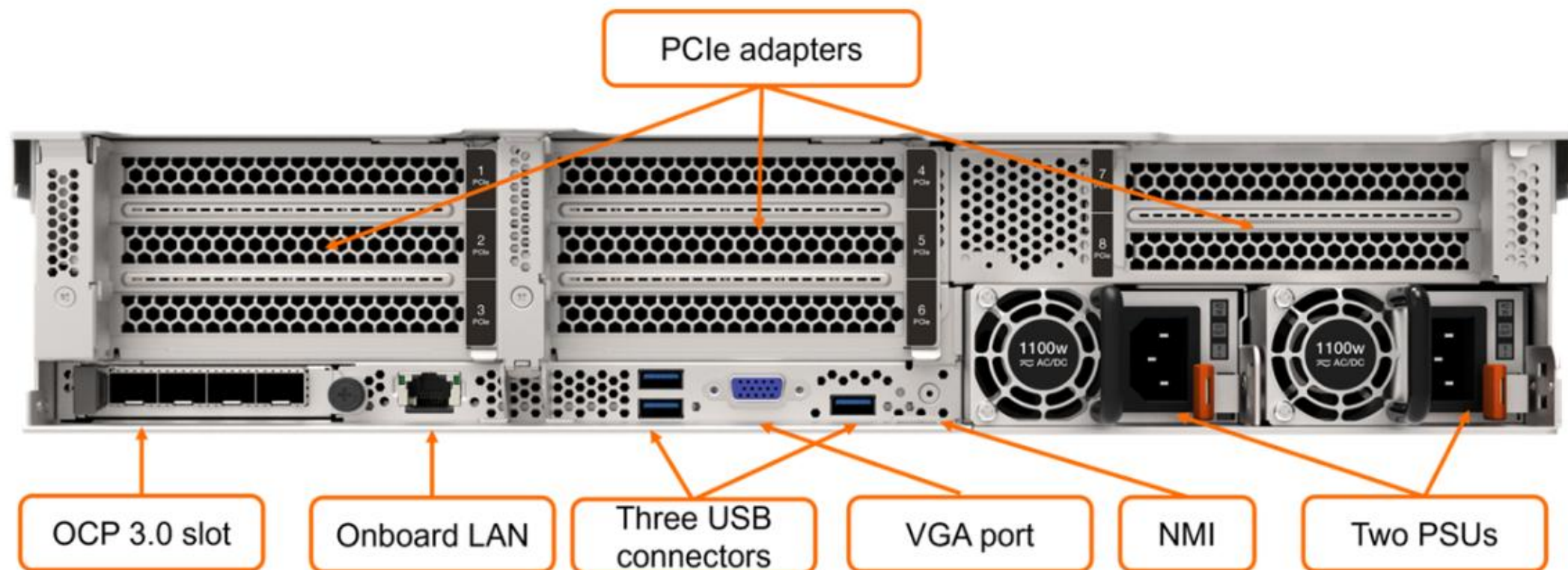


Up to 24 2.5-inch drives (combinations of SAS/SATA, NVMe, and AnyBay)



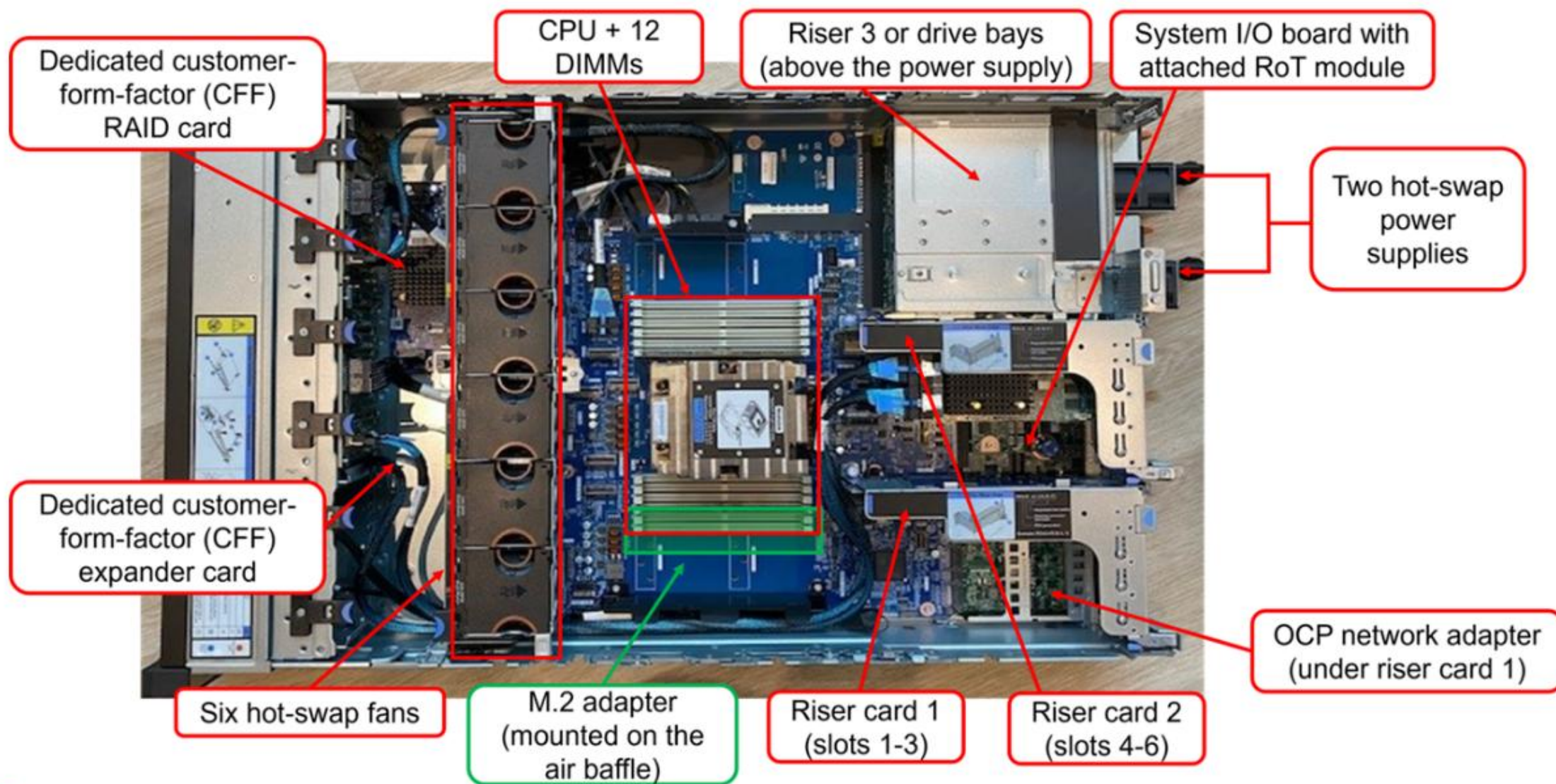
Up to 12 3.5-inch drives (combinations of SAS/SATA, NVMe, and AnyBay)

ThinkSystem SR655 V3 rear view



Note: For more information about rear PCIe or drive configurations, refer to the [System configurations and diagrams](#) section.

ThinkSystem SR655 V3 inside view



ThinkSystem SR655 V3 system board

The SR655 V3 system board assembly has five components:

- Processor board
 - A board containing CPU sockets, PCIe slots, memory slots, and other server component connectors
- Power inverter board (PIB)
 - A board connecting to the processor board (board-to-board connection) that provides system power conversion
- Fan board
 - A board connecting to the processor board (via cable connection) that provides system fan cage power and signal
- System I/O board
 - A board containing the system BMC (XCC2) management port, USB ports, and a VGA connector
 - A Micro SD card slot to extend XCC2 storage space for the backup of firmware and for remote console virtual media
- Firmware and Root of Trust board (RoT module)
 - A mezzanine card containing the Trusted Platform Module (TPM), UEFI firmware, XCC2 firmware, and a silicon Root of Trust

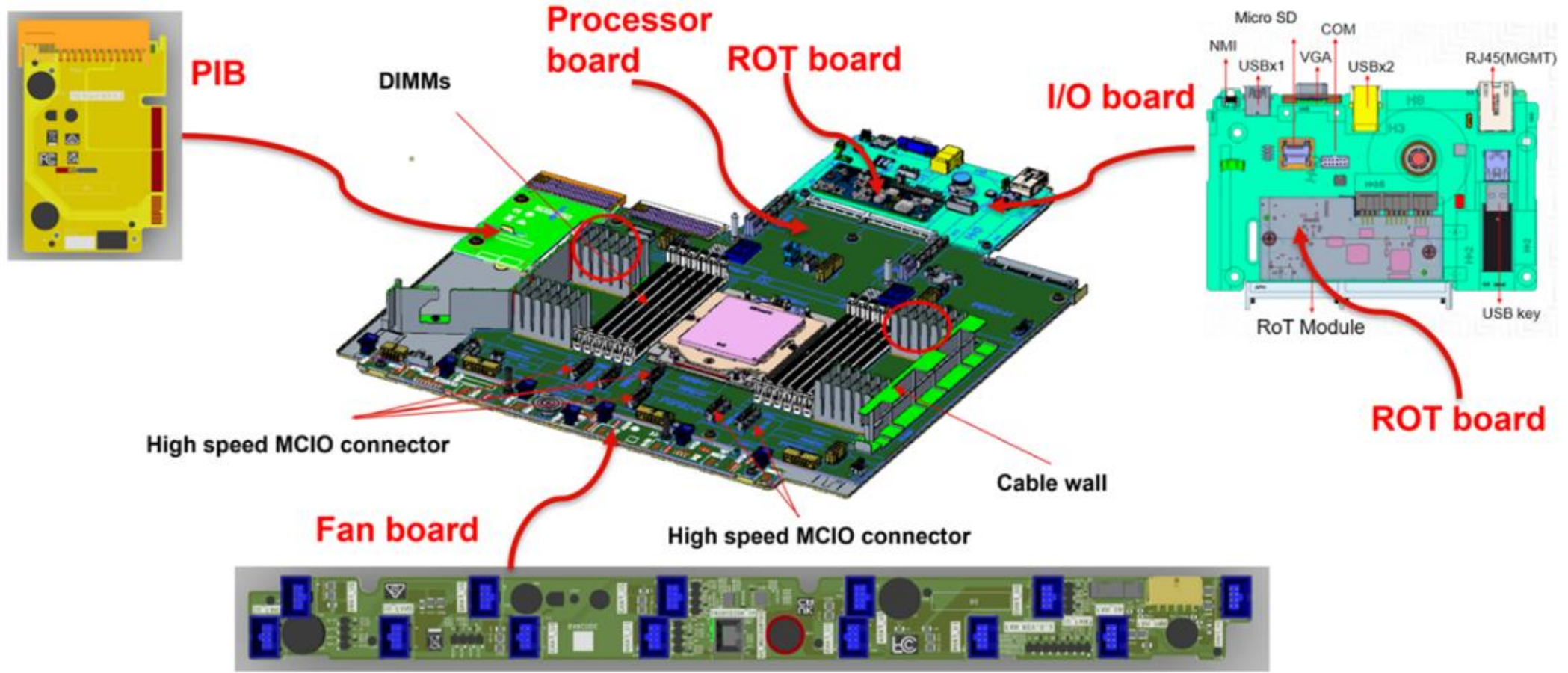
Click [HERE](#) to see the system board assembly

ThinkSystem SR655 V3 system board



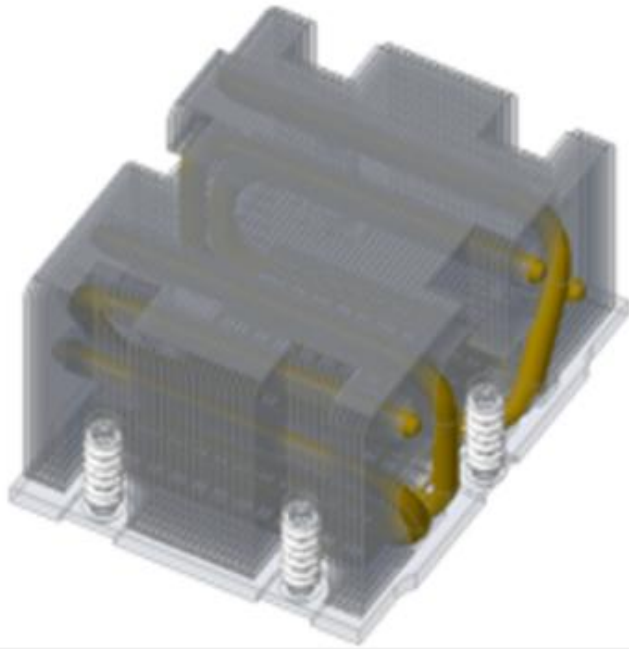
SR655 V3 main board view

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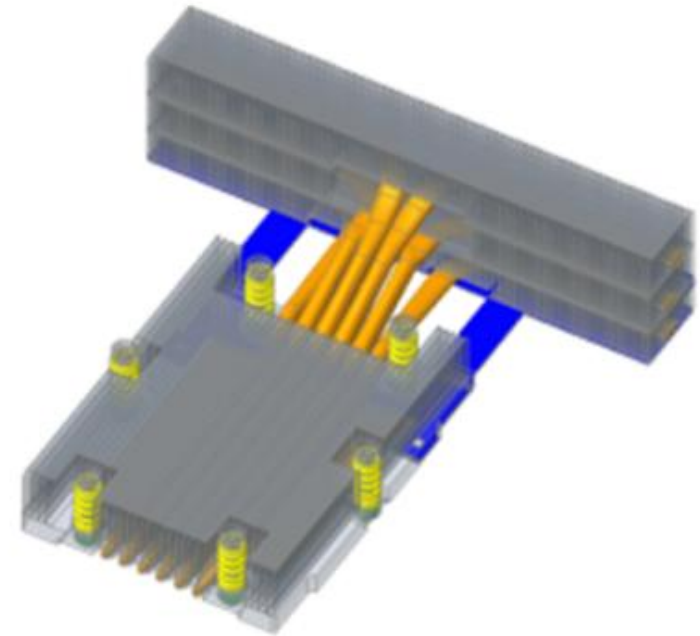


ThinkSystem SR655 V3 processor heat sinks

The SR655 V3 supports two types of heat sink: standard and performance.



Standard (CPU heat sink – 2U in height)
For processors with a TDP of 200 W to 300 W

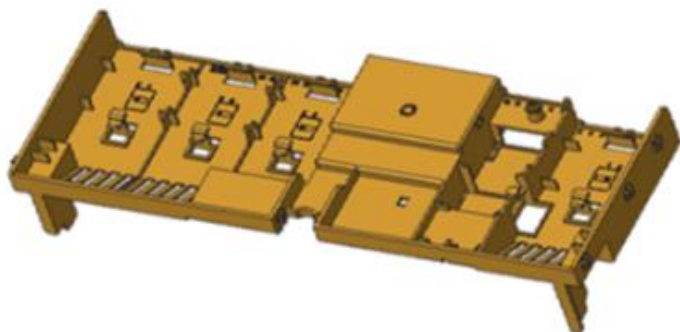


Performance (CPU heat sink – 1U in height,
front fin – 2U in height)

ThinkSystem SR655 V3 air baffles

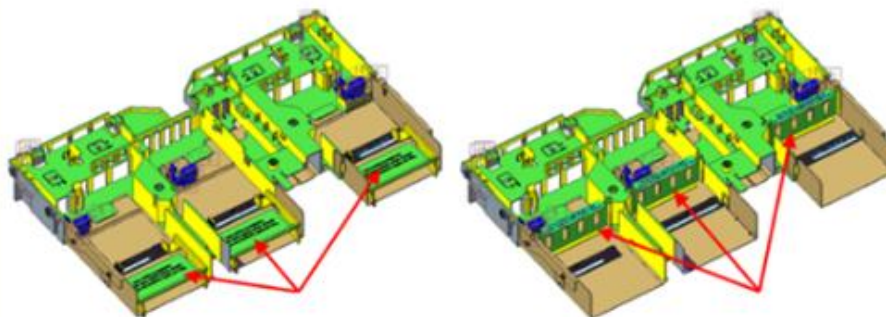
The SR655 V3 supports two types of air baffle.

Standard air baffle



Used when no GPU is installed or when GPU power consumption is less than or equal to 75 W

GPU air baffle

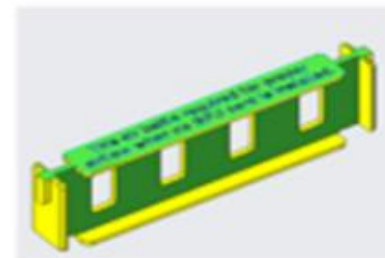


GPU air baffle with three fillers

GPU air baffle with three extend kits

Used when GPU power consumption is greater than or equal to 150 W (GPU form factor FHFL or DW)

GPU air baffle extend kit



GPU air baffle filler

