

Product overview

Product description and front, rear, and inside views

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 with a vertical color gradient that transitions from green at the top to blue at the bottom.

Lenovo

ThinkSystem SR635 V3 product overview

The SR635 V3 is a 1U one-socket rack server that features the next-generation AMD EPYC 9004 Series processors (codename: Genoa). This server is designed to be highly flexible to support many kinds of IT workloads. There are two SR635 V3 machine types:

- 7D9G (three-year warranty)
- 7D9H (one-year warranty)

SR635 V3 with security door



SR635 V3 with 10 front 2.5-inch drives

Note: 3.5-inch drive bays are not supported in the SR635 V3.

Features and specifications

Scroll down for more information

Attribute	Specifications
Form factor	1U 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 socketUp to four GMI3 links at up to 32 GT/sTDP of up to 320 W
Memory	12 DDR5 DIMM slots, 12 channels, support for one DIMM per channel (1DPC) <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	<ul style="list-style-type: none">Up to 12 2.5-inch hot-swap drive bays, combinations of SAS/SATA, NVMe, or AnyBayUp to 16 EDSFF SSDs (5.9 mm) Front bays can be one of the following: <ul style="list-style-type: none">Four 2.5-inch hot-swap SAS/SATA or NVMeEight 2.5-inch hot-swap SAS/SATA10 2.5-inch hot-swap SAS/SATA, AnyBay or NVMe, or combinations16 E1.S hot-swap EDSFF NVMe Rear can be one of the following: <ul style="list-style-type: none">Two 2.5-inch hot-swap SAS/SATA bays

Features and specifications

Scroll down for more information

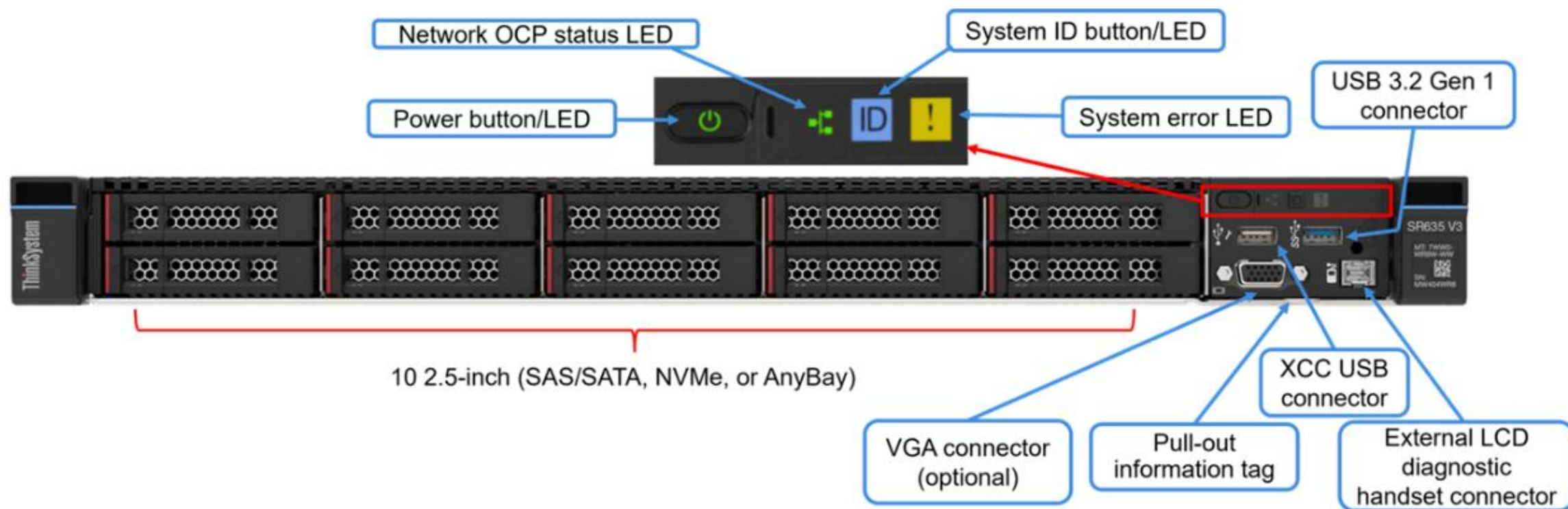
Attribute	Specifications
	<ul style="list-style-type: none">Internal CFF 8/16i HBA/RAID
Network interface	<p>Dedicated OCP 3.0 SFF slot with a PCIe 5.0 interface (rear-accessible)</p> <ul style="list-style-type: none">One port can be shared with the XClarity Controller 2 (XCC2) management processor for Wake-on-LAN and NC-SI support.Additional PCIe network adapters supported in PCIe slots.
PCIe slots	<ul style="list-style-type: none">Up to five PCIe 4.0 or 5.0 slots (three in the rear and two in the front)<ul style="list-style-type: none">Support for up to four 75 W GPUsOne rear OCP NIC 3.0 slotOptional front I/O access for two PCIe 4.0 slots and one OCP 3.0 slotInternal CFF formfactor RAID/HBA
Cooling	<p>Seven system fan solution</p> <p>Two fan types, to be selected based on the system configuration</p> <ul style="list-style-type: none">4056 dual rotor standard fan4056 dual rotor high-performance fan
Power supplies	Up to two hot-swap power supplies
Management interface	Lenovo XClarity Controller 2 (XCC2)

[No Title]

Note: For the latest specifications, refer to the [Lenovo Press product guide](#).

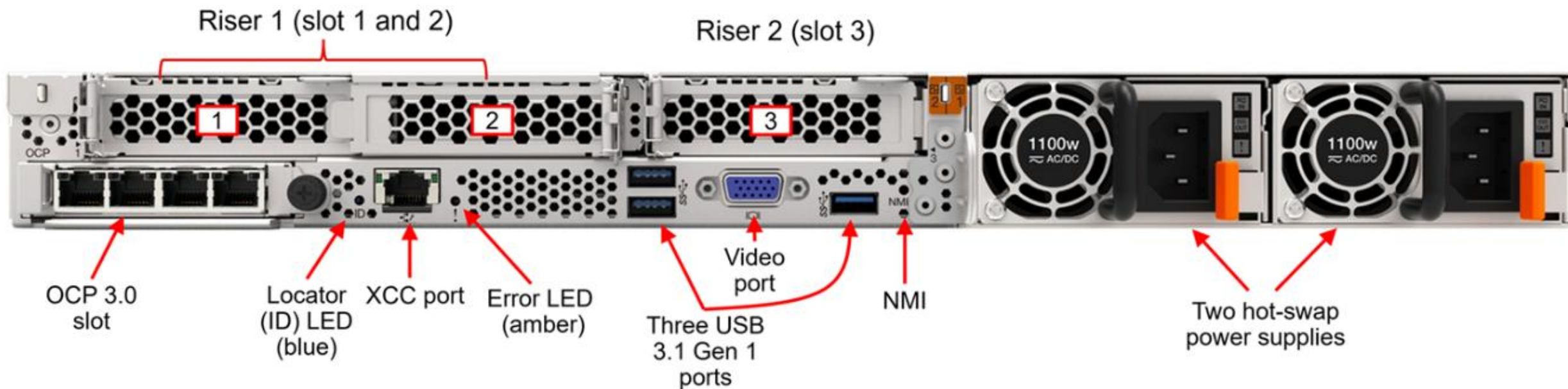
Front view

This figure shows the configuration with 10 2.5-inch drives. The other front drive configurations will be shown in the System configurations and diagrams section.



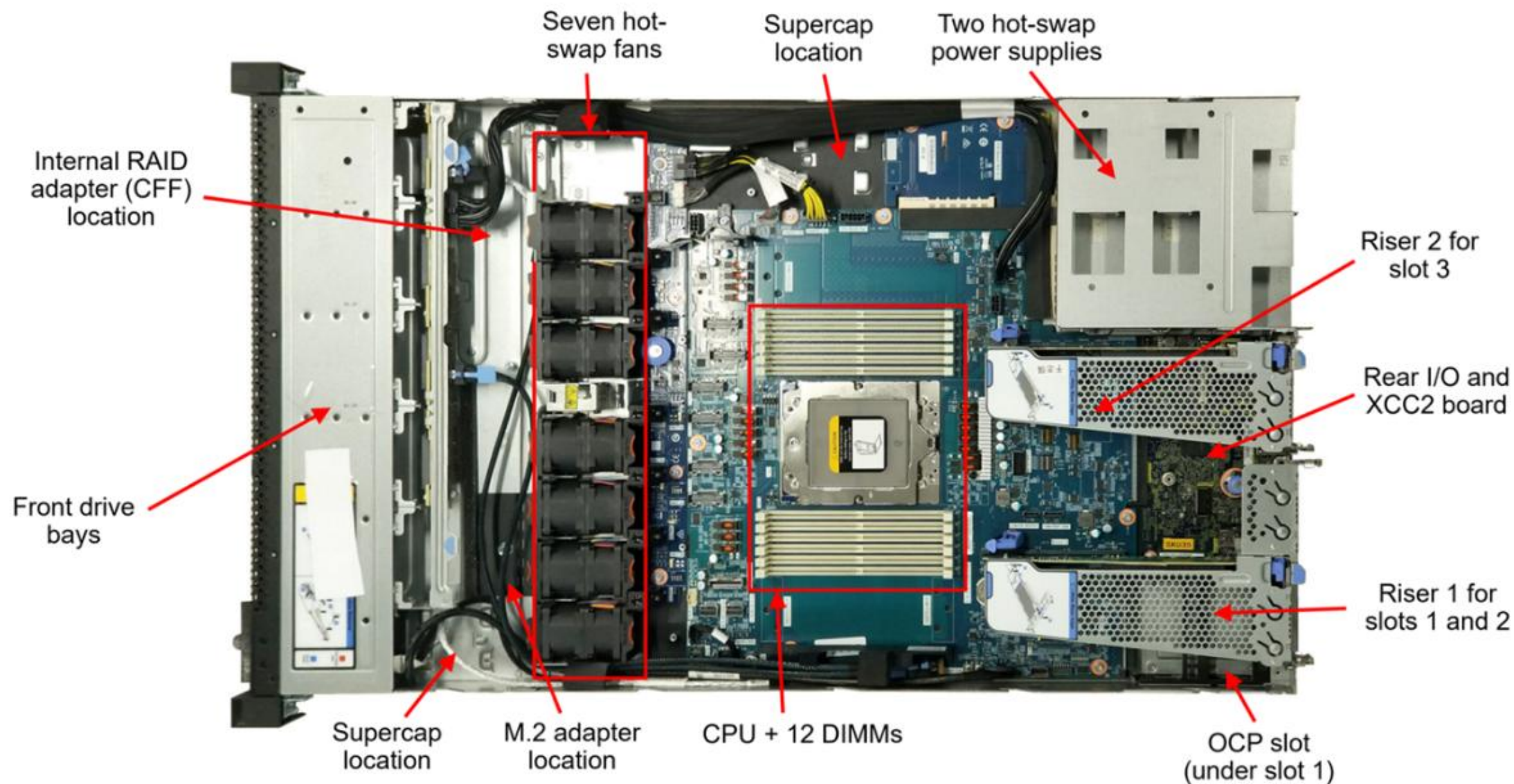
Rear view

This figure shows the configuration with three low profile (LP) PCIe slots. The other configurations will be shown in the System configurations and diagrams section.

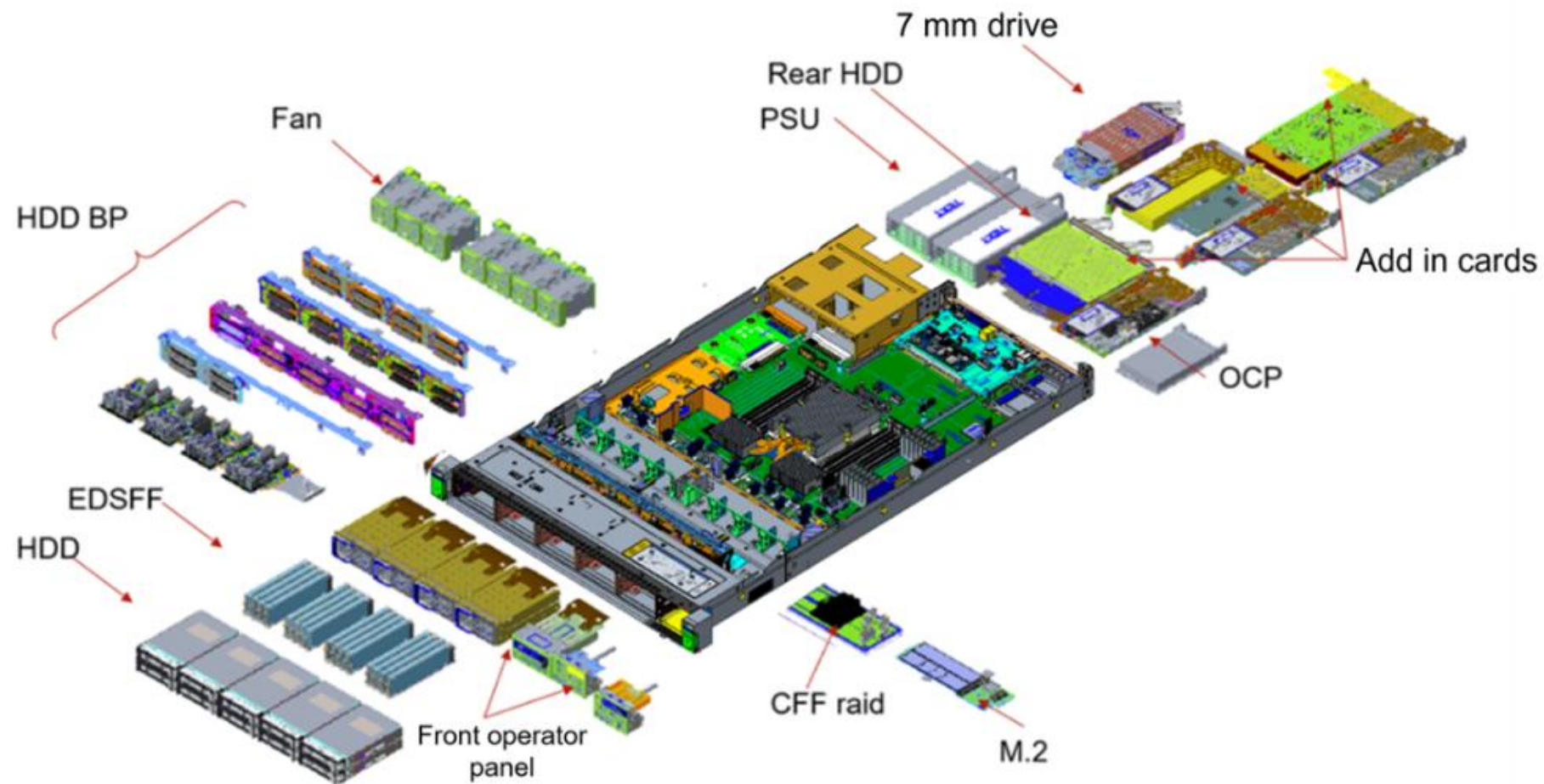


Note: For more information about rear PCIe or drive configurations, refer to the [System configurations and diagrams](#) section.

Inside view



Exploded view



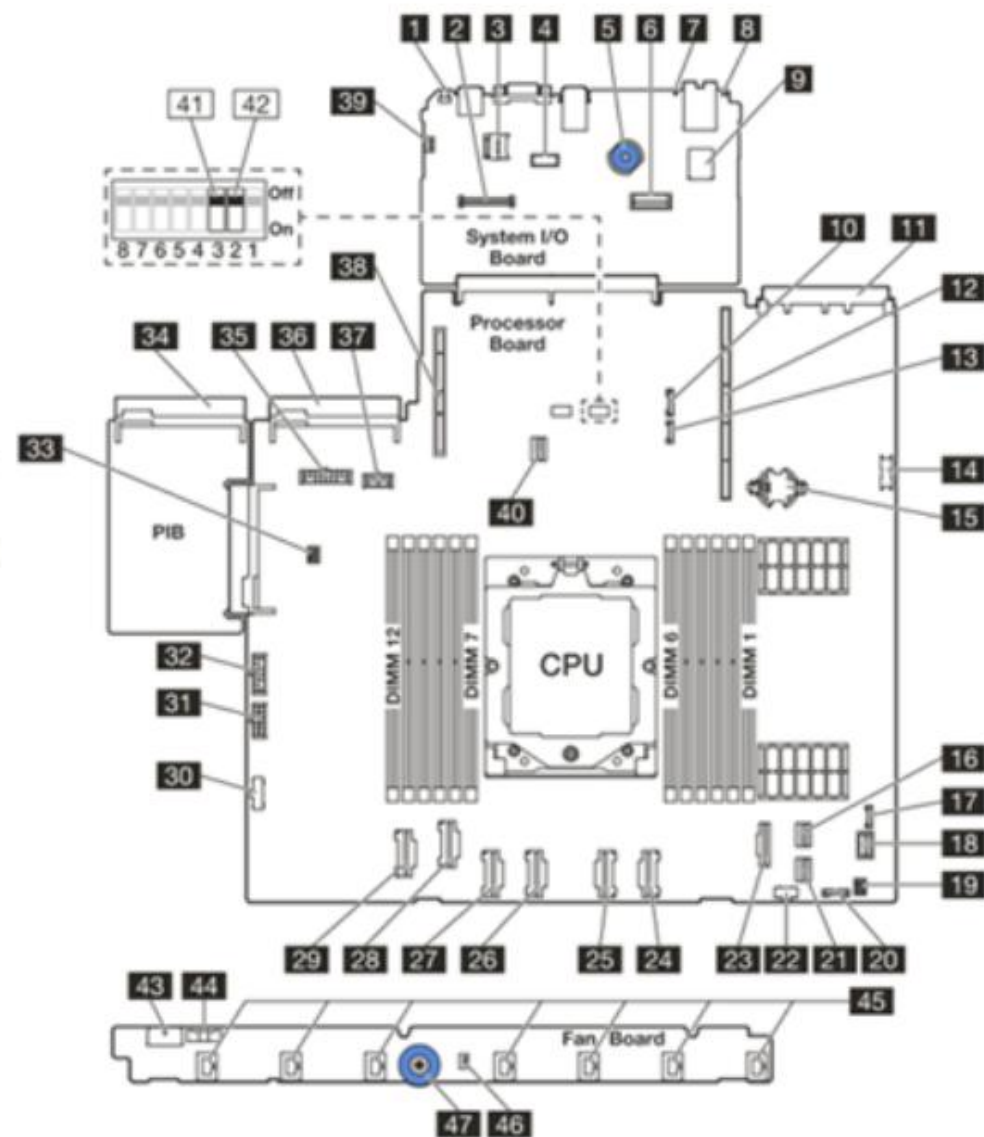
System board assembly

The SR635 V3 system board 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

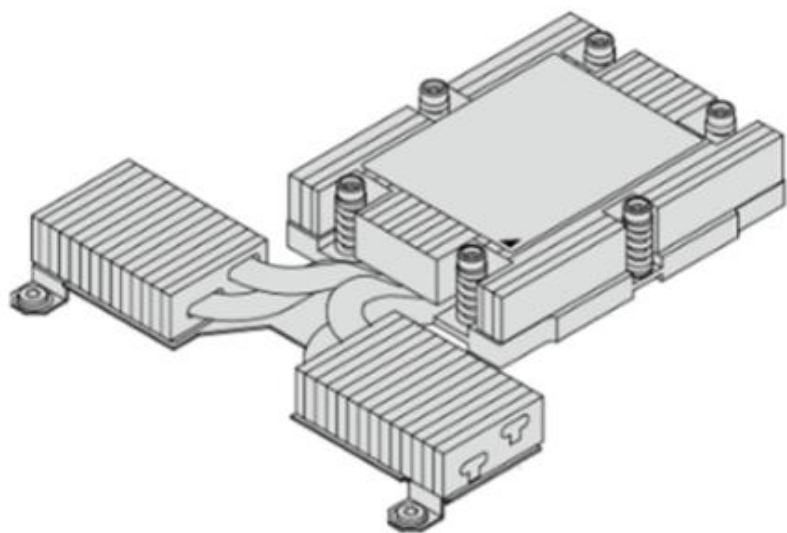
Processor board connectors

- | | |
|--|--|
| 1 NMI Button | 27 PCIe Connector 3 |
| 2 RoT Connector | 28 PCIe Connector 2 |
| 3 Micro SD Connector | 29 PCIe Connector 1 |
| 4 Serial Port Connector | 30 Fan Board Sideband Connector |
| 5 Lift Handle | 31 Fan Board Power Connector |
| 6 Second MGMT Ethernet Connector | 32 Internal RAID Power Connector |
| 7 System Error LED | 33 Pump Connector |
| 8 System ID LED | 34 Power Supply 1 Connector |
| 9 Internal USB Connector | 35 BP Power Connector |
| 10 7mm/Rear BP Sideband Connector | 36 Power Supply 2 Connector |
| 11 OCP 3.0 Network Card Connector | 37 GPU/7mm/Rear BP Power Connector |
| 12 Riser 1 Slot | 38 Riser 2 Slot |
| 13 Leak Detection Connector | 39 Intrusion Switch Connector (Reserved) |
| 14 Front USB Connector | 40 M.2/7mm BP Signal Connector |
| 15 3V Battery (CR2032) | 41 Override Power-on Password Switch |
| 16 PCIe Connector 8 / SATA Connector 1 | Off: Default |
| 17 External LCD Connector | On: Override Power-on Password |
| 18 Front VGA Connector | 42 Clear CMOS Switch |
| 19 Front Panel_Y Cable Connector | Off: Default |
| 20 Front Panel Connector | On: Clear CMOS |
| 21 PCIe Connector 9 / SATA Connector 2 | 43 Fan Board Power Connector |
| 22 M.2 Power Connector | 44 Fan Board Sideband Connector |
| 23 PCIe Connector 7 / SATA Connector 0 | 45 Fan 1-7 Connectors |
| 24 PCIe Connector 6 | 46 Intrusion Switch Connector |
| 25 PCIe Connector 5 | 47 Lift Handle |
| 26 PCIe Connector 4 | |

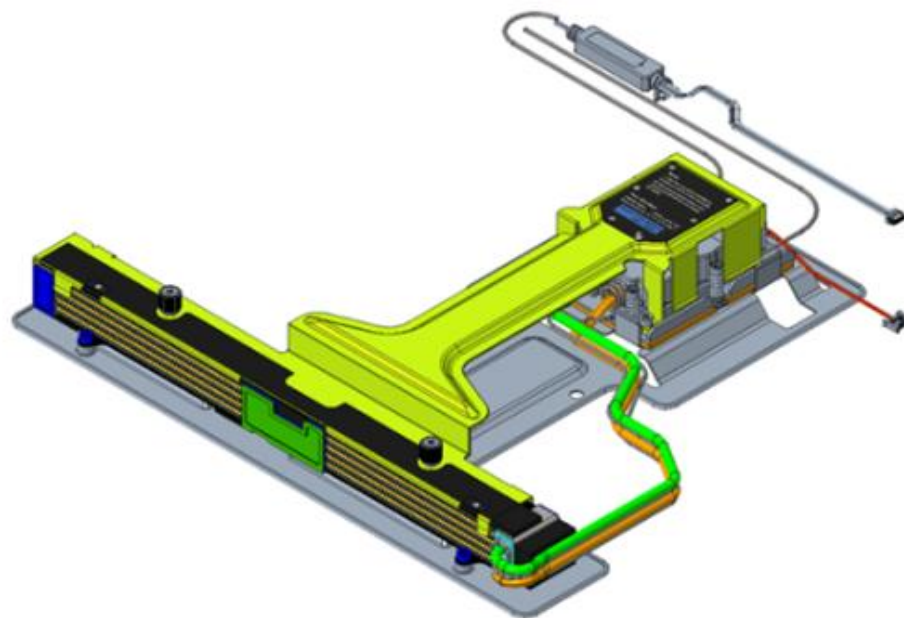


Processor heat sinks

The SR635 V3 supports two types of heat sink based on the different CPU TDPs.



1U performance heat sink
For processors with a TDP of 200 W to 320 W

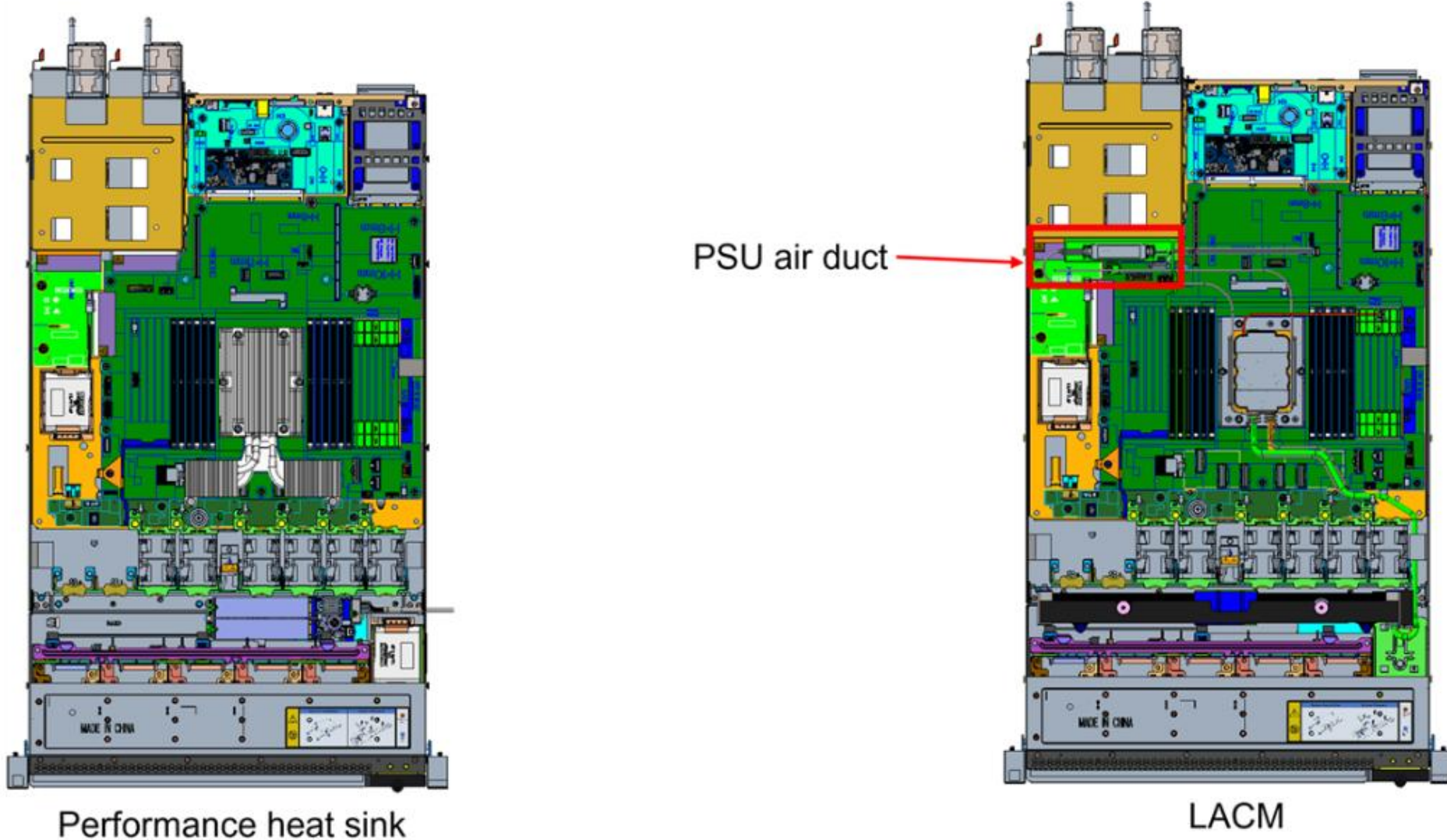


1U Lenovo Neptune liquid assisted cooling module
For processors with a TDP of 320 W to 400 W

Note: For more information about the Lenovo Neptune liquid assisted cooling module (LACM), refer to the [System configurations and diagrams](#) section.

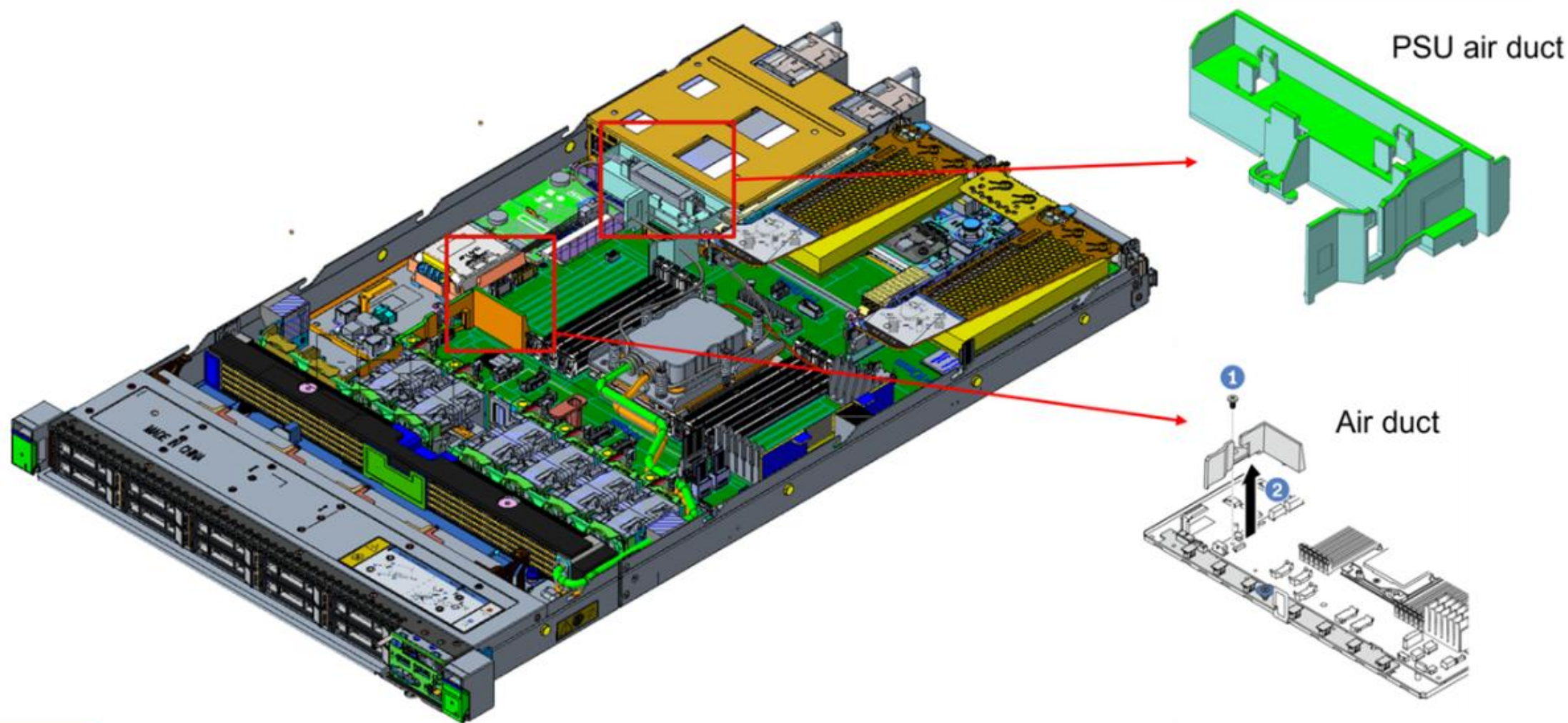
Performance heat sink and LACM

This figure shows the two different heat sinks that can be installed on the SR635 V3.



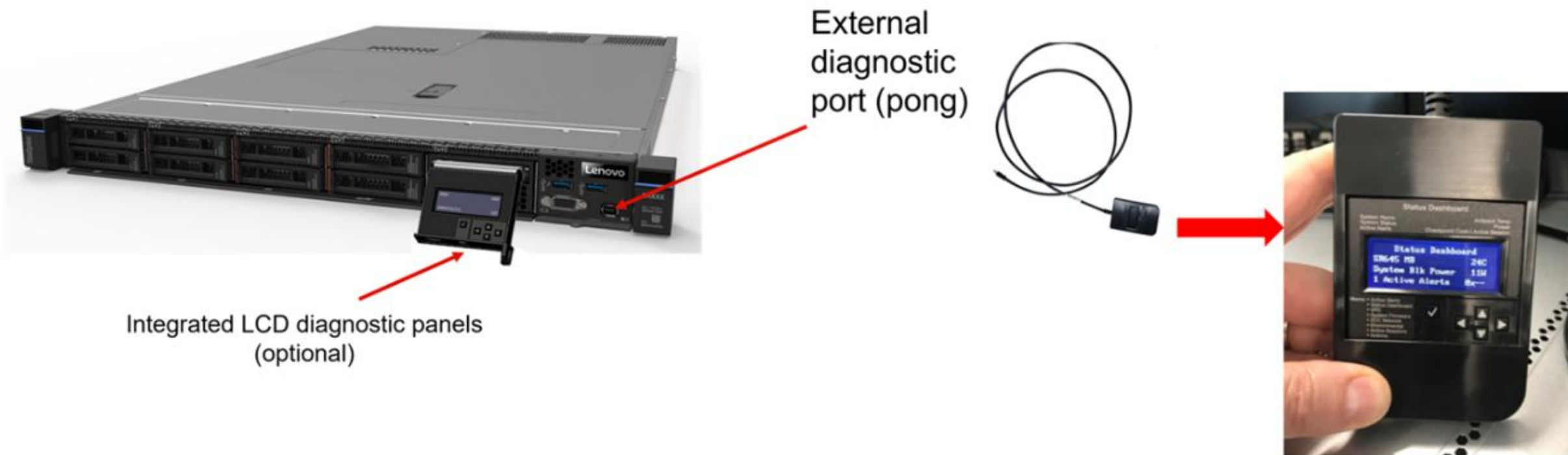
Air duct and PSU air duct

The PSU air duct is only available when the closed loop heat sink is in the configuration.



LCD diagnostic panel

The SR635 V3 supports both the external and integrated LCD diagnostic panels. Either of the panels can be used to quickly access system information, such as active errors, system health status, firmware version, network connection status, and health information. A demo video is available on the course landing page.



Management tools

The SR635 V3 supports the following Lenovo management tools:

Options		Functions							
		Multi-system mgmt	OS deployment	System configuration	Firmware updates ¹	Events/alert monitoring	Inventory/logs	Power mgmt	Power planning
Lenovo XClarity Controller				√	√ ²	√	√ ⁴		
Lenovo XClarity Essentials toolset	OneCLI	√		√	√ ²	√	√ ⁴		
	Bootable Media Creator			√	√ ²		√ ⁴		
	UpdateXpress			√	√ ²				
Lenovo XClarity Provisioning Manager			√	√	√ ³		√ ⁵		

Note:

- 1. Most options can be updated with Lenovo tools, but others, such as GPU firmware or Omni-Path firmware, require the use of supplier tools.
- 2. To update the firmware for the ROM option using Lenovo XClarity Essentials (LXCE) or Lenovo XClarity Controller 2 (XCC2), the UEFI settings must be set to Auto or UEFI.
- 3. To allow detailed adapter card information, such as model name and firmware levels to be displayed in XCC or LXCE, the UEFI settings for the ROM option must be set to Auto or UEFI.
- 4. Firmware updates for optional devices, such as adapters, are not supported.
- 5. LXPM provides a limited list of information about parts.