

Servicing the ThinkSystem SR630 V2

ES72038

May 2021

The Lenovo logo is positioned in the top right corner of the page. It consists of the word "Lenovo" in white, sans-serif font, oriented vertically within a dark blue rectangular background. The background of the entire slide is a solid blue color with a pattern of lighter blue dots of varying sizes, creating a textured effect.

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Prerequisites

- ES51757B – Introducing ThinkSystem tools
<https://lenovoedu.lenovo.com/course/view.php?idnumber=ES51757B>
- ES41759B – ThinkSystem problem determination
<https://lenovoedu.lenovo.com/course/view.php?idnumber=ES41759B>
- ES42108B – ThinkSystem V2 architecture introduction
<https://lenovoedu.lenovo.com/course/view.php?idnumber=ES42018B>
- ES51965 – Introducing the Intel Optane DC persistent memory module
<https://lenovoedu.lenovo.com/course/view.php?idnumber=ES51965>
- ES51780C – Servicing Lenovo ThinkSystem storage controllers
<https://lenovoedu.lenovo.com/course/view.php?idnumber=ES51780C>

Objectives

After completing the course, you will be able to:

- Describe the Lenovo ThinkSystem SR630 V2 server and components
- List the SR630 V2 server specifications
- Describe the SR630 V2 server configurations and diagrams
- Describe the SR630 V2 server management tools
- Describe the problem determination steps and explain how to troubleshoot issues with the SR630 V2

Product overview

Product description and front, rear, and inside views

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ThinkSystem SR630 V2 product overview

The Lenovo ThinkSystem SR630 V2 is a 1U rack server that features 3rd Generation Intel Xeon Scalable processors (Intel code name: Ice Lake). The SR630 V2 supports up to four 3.5-inch, 12 2.5-inch, or 16 EDSFF hot-swap drive bays. It also supports one or two processors and 32 DIMMs.

There are two SR630 V2 machine types: the 7Z70 (one-year warranty) and 7Z71 (three-year warranty).



SR630 V2 specifications

Scroll down for more information

Attribute	Specifications
Form factor	1U rack mount
Processor	One or two 3 rd Generation Intel Xeon Scalable processors (Intel code name: Ice Lake) – Silver, Gold, or Platinum level
Memory	Up to 32 DIMMs slots (16 DIMMs per processor) <ul style="list-style-type: none">• Supports up to 4 TB with 3200 TruDDR4 DIMMs• Supports up to 16 Intel Optane Persistent memory 200 Series modules
Disk drive bays	Up to four 3.5-inch, 12 2.5-inch, or 16 EDSFF hot-swap drive bays <ul style="list-style-type: none">• Front bays can be one of the following:<ul style="list-style-type: none">• 10 2.5-inch hot-swap – AnyBay• Eight 2.5-inch hot-swap – SAS/SATA• 16 EDSFF hot-swap drives• Four 3.5-inch hot-swap – AnyBay or SAS/SATA

Note: For more detailed of system specifications, refer to [Lenovo Press](#).

SR630 V2 specifications

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Attribute	Specifications
	<ul style="list-style-type: none">• Rear bays can be one of the following:<ul style="list-style-type: none">• Two 2.5-inch hot-swap – SAS/SATA or NVMe bays• Two 7 mm 2.5-inch hot-swap – SATA or NVMe bays <p>Internal M.2 module supporting up to two M.2 drives for OS boot and drive storage support</p>
Network interface	<p>Dedicated OCP 3.0 SFF slot with PCIe 4.0 x16 host interface</p> <p>Supports a variety of two-port and four-port adapters with 1 GbE, 10 GbE, and 25 GbE network connectivity</p>
PCIe expansion slots	<p>Up to three PCIe 4.0 slots plus an OCP adapter</p> <p>Slot 3 requires four processors to be installed</p>
Cooling	<p>Eight N+1 redundant hot-swap 40 mm fans</p> <p>One additional fan integrated in each of the two power supplies</p>

Note: For more detailed of system specifications, refer to [Lenovo Press](#).

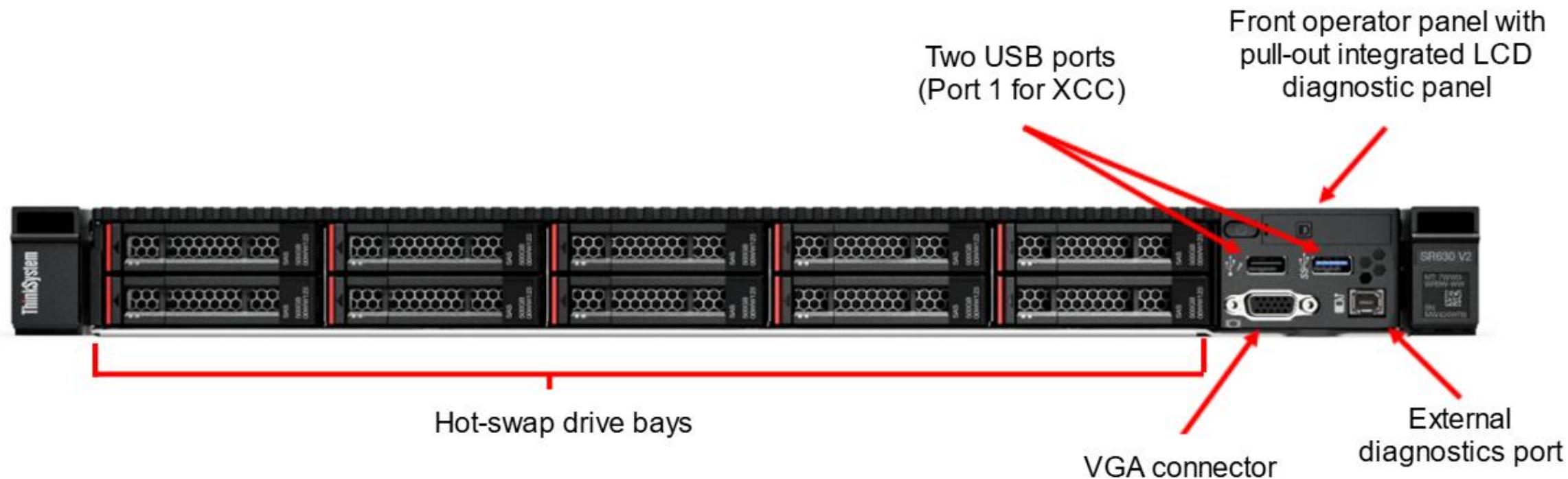
SR630 V2 specifications

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Attribute	Specifications
	GbE network connectivity
PCIe expansion slots	Up to three PCIe 4.0 slots plus an OCP adapter Slot 3 requires four processors to be installed
Cooling	Eight N+1 redundant hot-swap 40 mm fans One additional fan integrated in each of the two power supplies
Power supplies	Up to two hot-swap redundant power supplies
Storage controller	<ul style="list-style-type: none">• 12 onboard SATA ports (Intel VROC SATA RAID, formerly known as Intel RSTe RAID)• Up to 12 onboard NVMe ports (includes Intel VROC NVMe RAID, with optional license for non-Intel NVMe SSDs)• NVMe adapter (supports Intel VROC NVMe RAID)• 12 Gb SAS/SATA RAID or non-RAID adapters

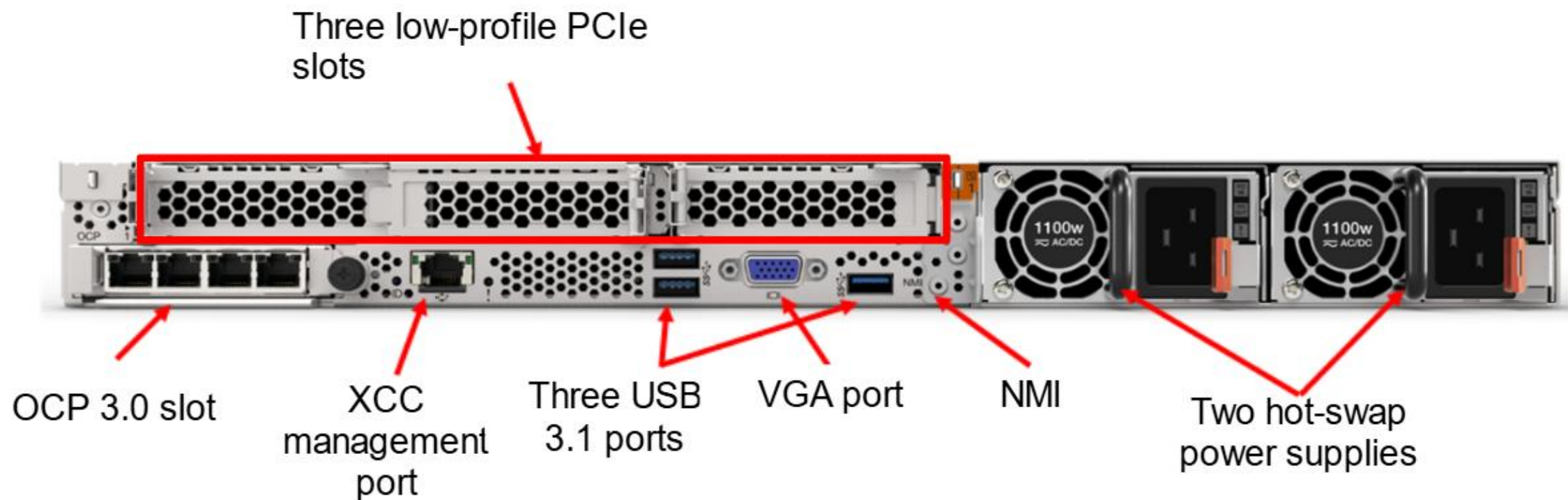
Note: For more detailed of system specifications, refer to [Lenovo Press](#).

SR630 V2 front view



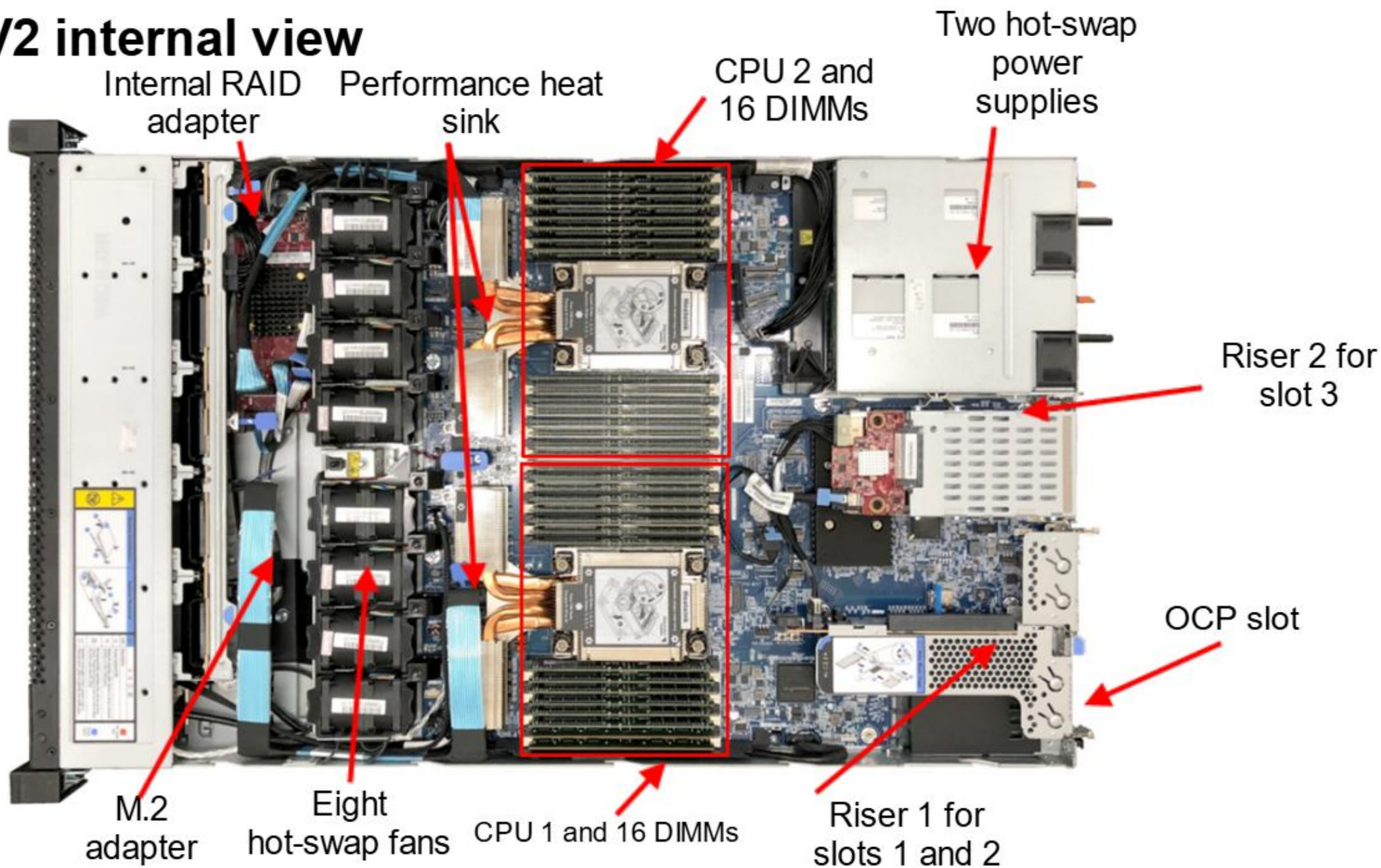
Note: For details of front hot-swap drive configurations, refer to the drive bay options page.

SR630 V2 rear view



Note: For details of rear hot-swap drive configurations, refer to the drive bays option page.

SR630 V2 internal view



LCD diagnostic panel

The SR630 V2 supports the external and internal 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.

Click the buttons to check the panels

External

External diagnostic port

Internal

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LCD diagnostic panel

The SR630 V2 supports the external and internal 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.

Click the buttons to check the panels

External

Internal

Fixed operator panel



Integrated diagnostic panel



SR630 V2 processor heat sink



Standard heat sink

For processors with a TDP of less than 205 watts



Performance heat sink

For processors with a TDP of more than 205 watts

Note: If the server is installed with a performance heat sink, air baffles will not be supported.

SR630 V2 cooling fans

The SR630 V2 supports up to eight 40 mm hot-swap fans, and the fans are N+1 redundant. Depending on the configuration, all the server fans will have to be either standard (21K RPM) or performance (28K RPM). Six fans are needed when one processor is installed, and eight fans are needed when two processors are installed.

Performance fans are required if any of the following conditions are met:

- The processors have a TDP of more than 165 watts
- There is a front AnyBay drive backplane for 10 2.5-inch drives
- There is a front EDSFF drive backplane for 16 drives
- There is a rear 2.5-inch backplane for two drives
- There is an NVIDIA T4 or any other passive GPU (a GPU without its own internal fan)