

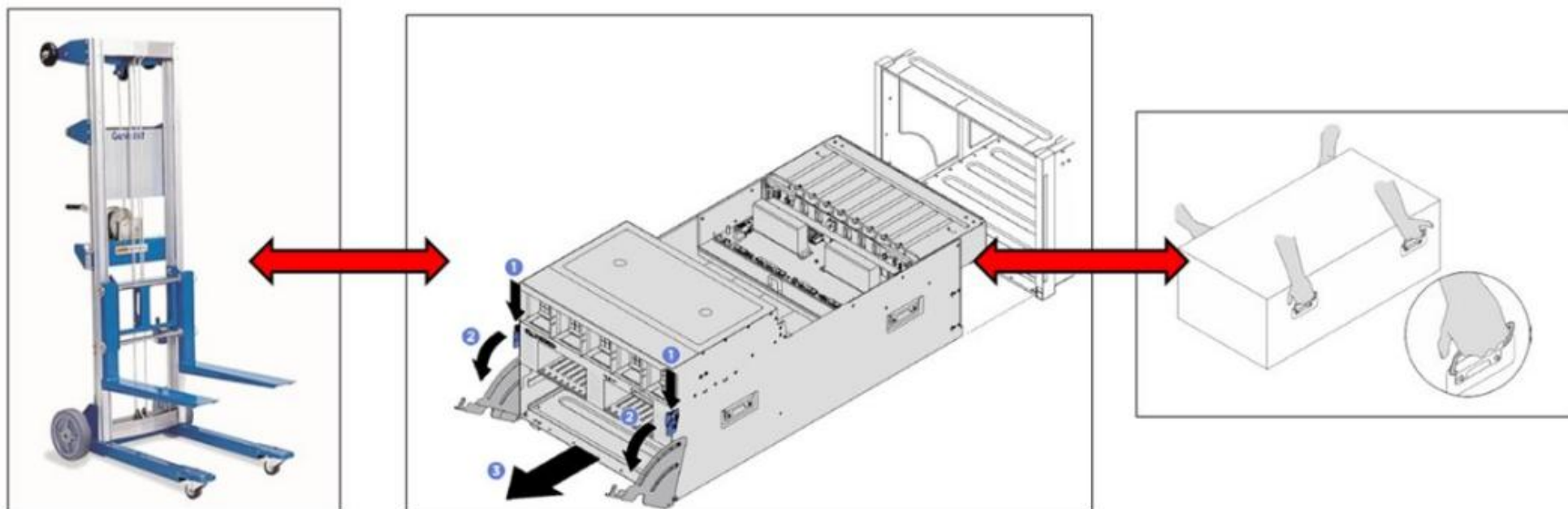
Hardware replacement tips

Part replacement highlights

Lenovo

Removing a GPU shuttle

To remove a GPU shuttle from the SR685a V3, two people are required to hold the four handles on the sides of the GPU shuttle. Then, the GPU shuttle should be placed on a lift tool. If the customer does not have a lift tool, Lenovo offers the Genie GL-8 lift tool (machine type model: 7D5YCTO1WW) as a configurable option that customers can order.



Replacing parts in a GPU shuttle

The following parts in a GPU shuttle can be replaced by a single person as they can be accessed without removing the shuttle from the chassis:

- Front hot-swap drives
- Front hot-swap fans
- Rear hot-swap fans
- Hot-swap PSUs
- Front diagnostic panel
- PCIe switch shuttle

To access other parts in a GPU shuttle – for example, a drive backplane, or a GPU – it is necessary to remove the shuttle from the chassis, so two people and the lift tool are required to replace these parts.

Remove the 8U GPU shuttle

Follow instructions in this section to remove the 8U compute shuttle. The procedure must be executed by a trained technician.

About this task

9037



CAUTION

The weight of this part or unit is more than 55 kg (121.2 lb). It takes specially trained persons, a lifting device, or both to safely lift this part or unit.

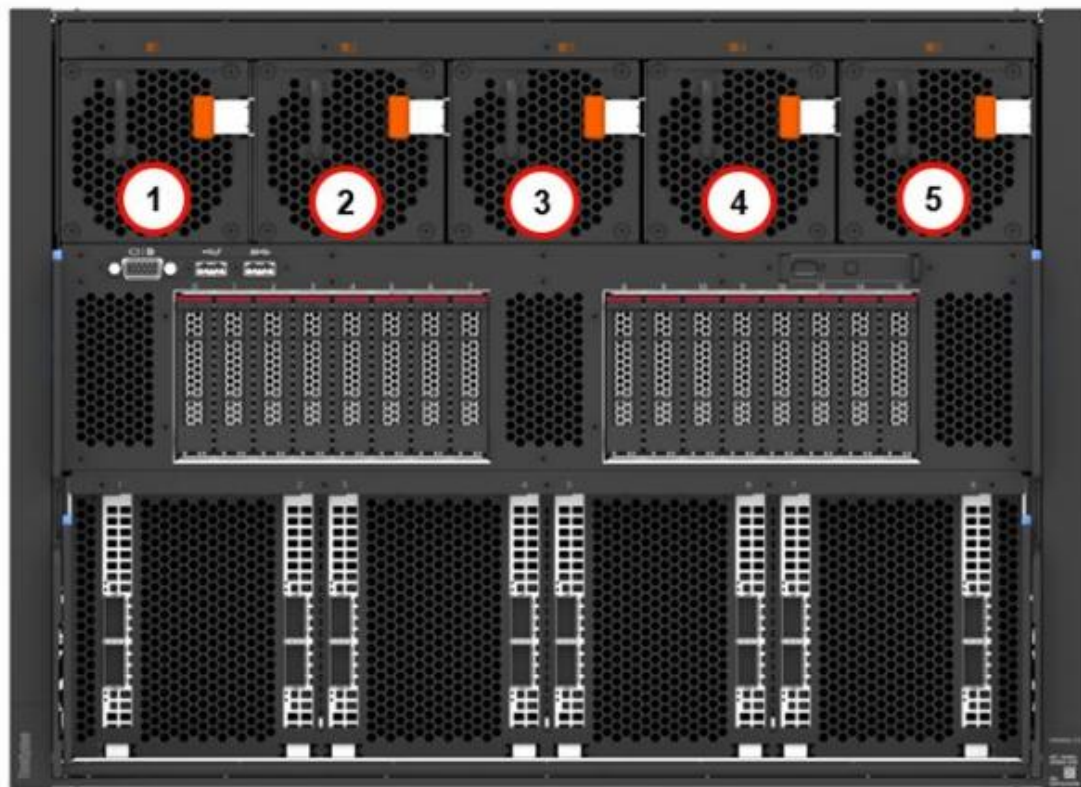
ATTENTION

- Read [Installation Guidelines](#) and [Safety inspection checklist](#) to ensure that you work safely.
- Power off the server and peripheral devices and disconnect the power cords and all external cables. See [Power off the server](#).
- Two people and one lifting device are required to perform this procedure.

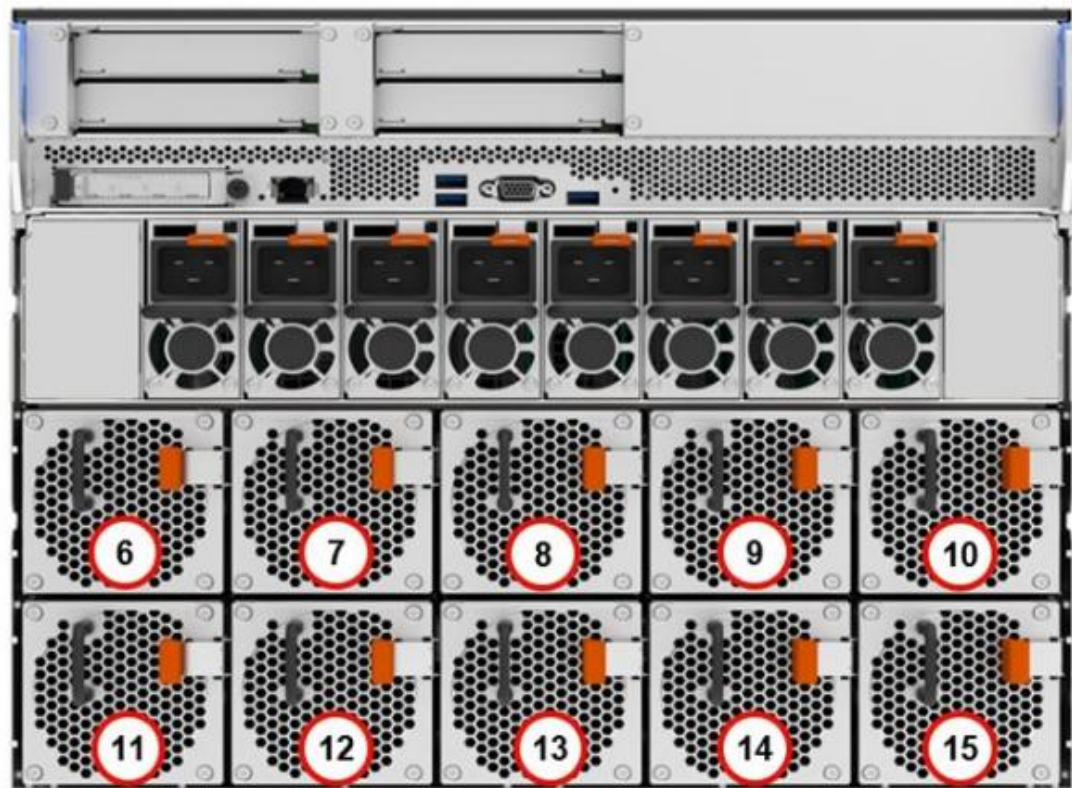
Warning statement in the
SR685a V3 User Guide

Replacing a fan

SR685a V3 front and rear hot-swap fans do not have status LEDs. Make sure to check the fan error messages in XCC and the label on the fan to cross check which fan needs to be replaced.



Front fan numbering



Rear fan numbering

Replacing a firmware and RoT module

After replacing a firmware and RoT security module (RoT module), servicers must update the UEFI and LXPM firmware to the latest supported version before starting the system. If this does not happen, the system will not be able to recognize the correct firmware and will not start normally. As a result, the user will not be able to access the system OS.

Use one of the following methods to update the UEFI and LXPM firmware on the system after replacing the RoT module:

- OneCLI commands
- A USB boot kit with UEFI firmware and LXPM firmware packages
 - For more information on how to create a USB boot kit, refer to the following GLOSSE article:
[How to create USB boot kit with OneCLI for RoT replacement in the field](#)

For the complete procedures, refer to the following GLOSSE tip page:

[How to do RoT Module FW update on ThinkSystem V3 machines](#)

Updating the VPD

After replacing a processor board, service personnel must update the VPD (machine type and serial number) on the processor board. The SR685a V3 VPD update procedure is the same as that used with other ThinkSystem models (using the `onecli config set` OneCLI command).

Replacing an RoT module or system I/O board does not require an update of the VPD. For more information, refer to the LXCE OneCLI common task section of course [ES51757B Introducing ThinkSystem tools](#), or the Update the Vital Product Data (VPD) section of the ThinkSystem SR685a V3 User Guide on [Lenovo Docs](#).

Updating the GPU or GPU board firmware

There is a single firmware package for all GPU-related components. (This applies to both NVIDIA and AMD GPUs.)

Use XCC / OneCLI to perform the task. You do not need to use any specific AMD or NVIDIA tools to perform a GPU or GPU board firmware update on an SR685a V3.

Firmware					
FirmwareName	Description	Manufacturer	Version	ReleaseDate	SoftwareID
Software Bundle	Firmware package containing controller firmware, UEFI Driver, and other sub components.	AMD	0x00000001		100274A1

SR685a V3 all-in-one firmware bundle package for
all eight AMD GPUs and GPU board in the XCC FFDC log

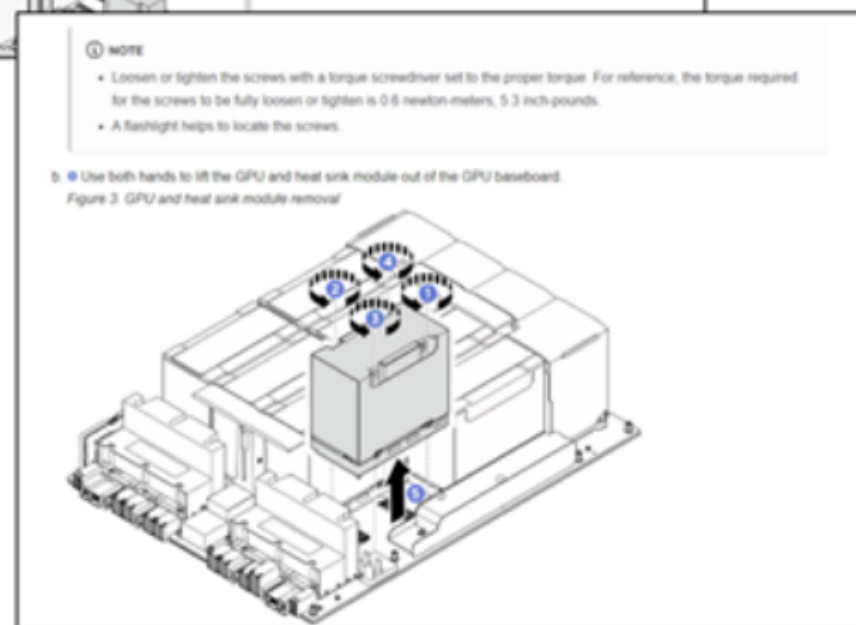
Replacing parts with a torque screwdriver

Replacement of the following parts requires a torque screwdriver with adjustable newton-meter settings:

- Processor heat sink
- Switch board heat sink
- GPU
- GPU board

The Lenovo FRU number for a torque screwdriver is 03GY000.

For the newton-meter settings required to replace the above parts, refer to the Hardware replacement procedures section of the SR685a V3 User Guide on [Lenovo Docs](#).



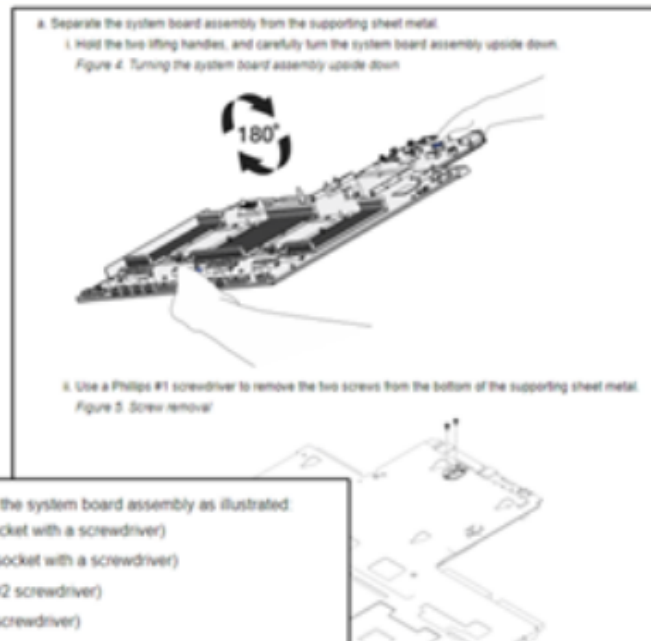
Replacing a processor board or system I/O board

To replace a processor board or system I/O board, servicers must first remove the system board assembly from the chassis. A hex socket tool kit (FRU PN: 03LD316), a PH2 screwdriver, and a PH1 screwdriver must then be used to remove the following components from the system board assembly:

- Two screws in the bottom of supporting sheet metal (with a PH1 screwdriver)
- Two cable guide brackets (with a PH2 screwdriver)
- Two guide pins (with a 7 mm hex socket)
- Two hex nuts (with a 5 mm hex socket)
- One lifting handle (with a PH2 screwdriver)
- Fifteen screws on the system board assembly (with a PH1 screwdriver)

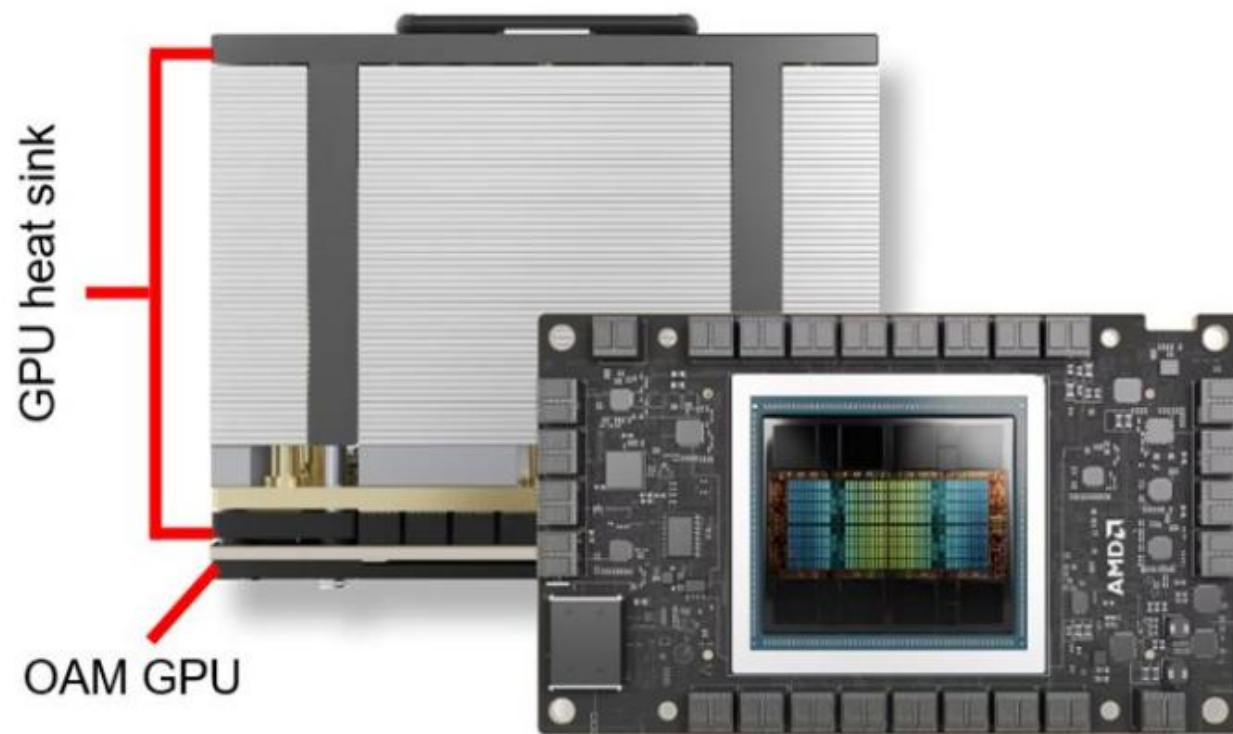
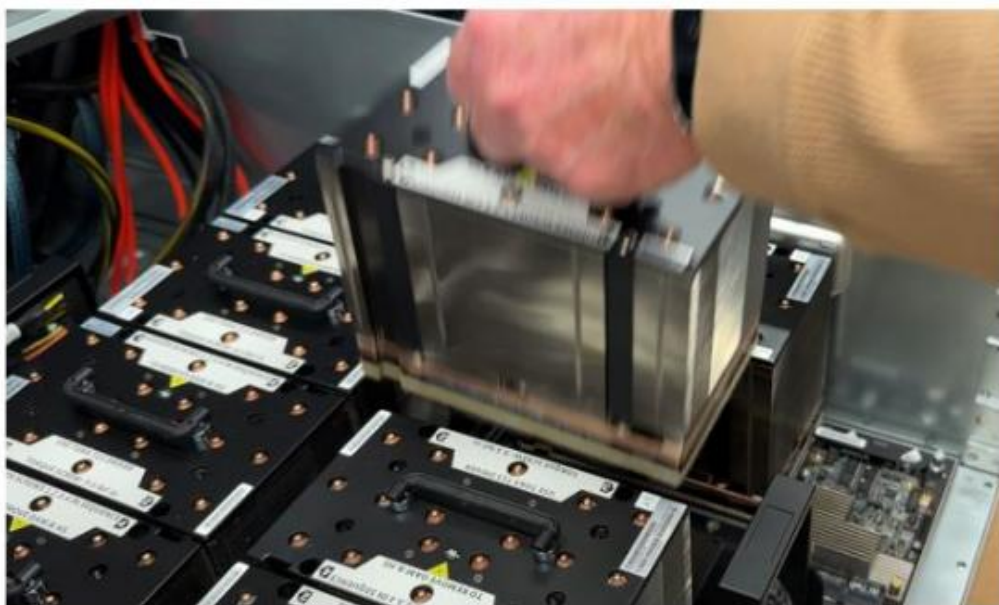
The system board assembly can then be separated from the supporting sheet metal, and following that, the system I/O board can be separated from the processor board.

For the complete system board assembly replacement procedures, refer to the Hardware replacement procedures section of the SR685a V3 User Guide on [Lenovo Docs](#).



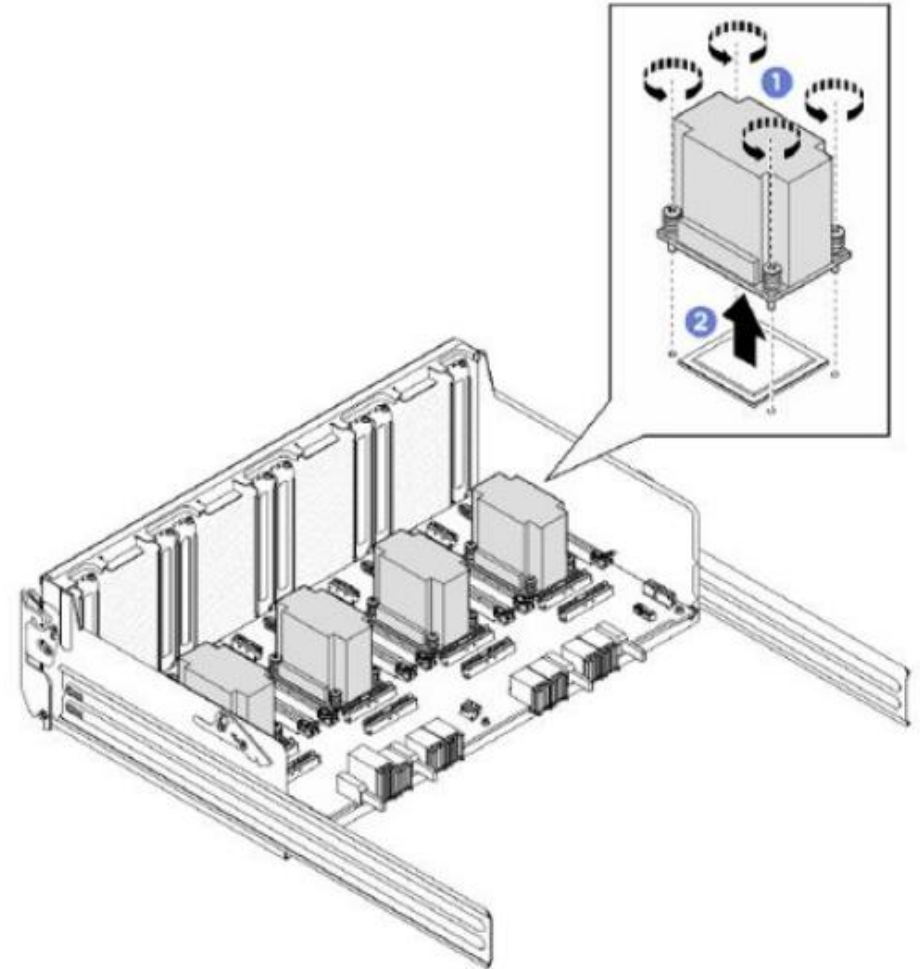
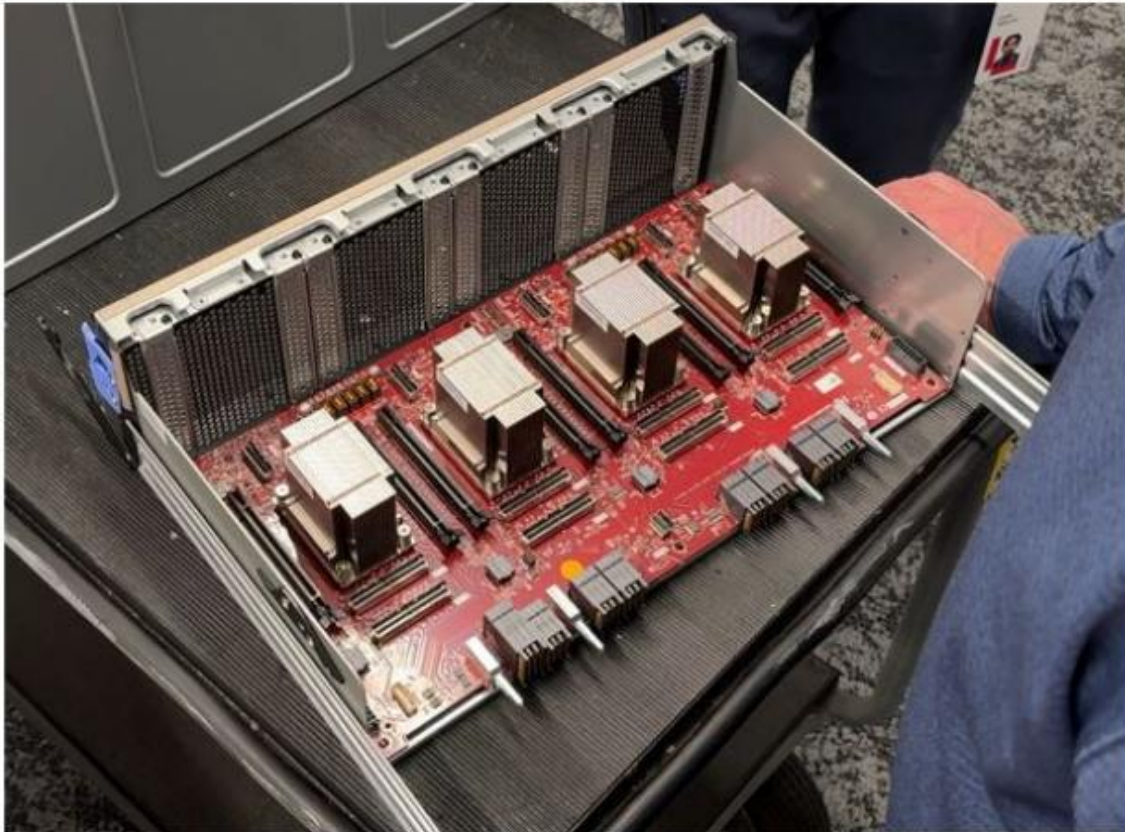
GPU module replacement tips

If a single GPU module fails and needs to be replaced, replace the whole GPU module. Do not separate the GPU from its heat sink. This rule applies to both NVIDIA and AMD GPU modules.



Switch board replacement tips

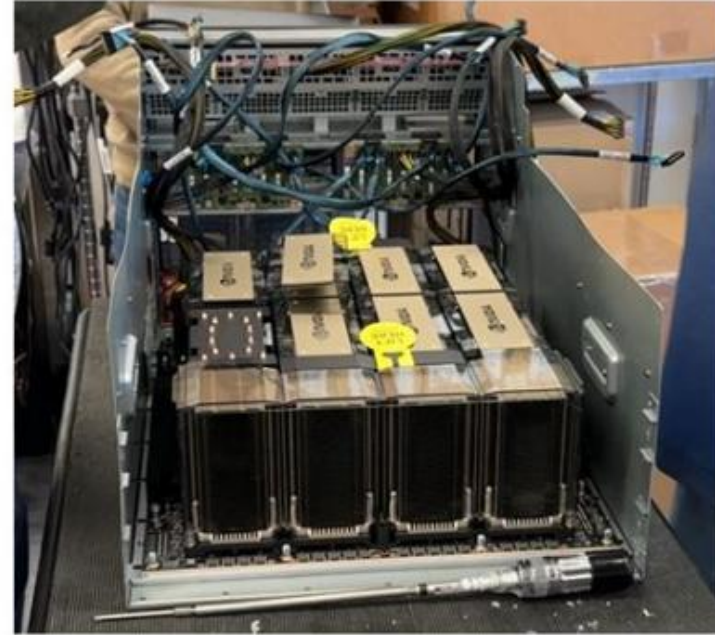
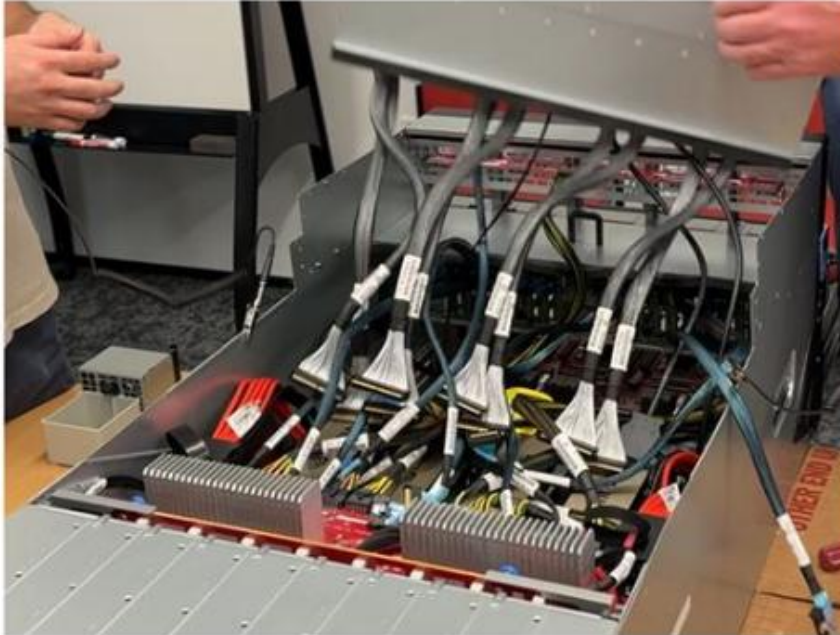
Before replacing a switch board, remove the four heat sinks on the switch board. Do not replace the switch board while the heat sinks are still installed on the board.



Cable replacement tips

Cable routing on the SR685a V3 is more complex than on other systems. Although there are labels on cables and next to each connector, service engineers might still get confused when replacing cables.

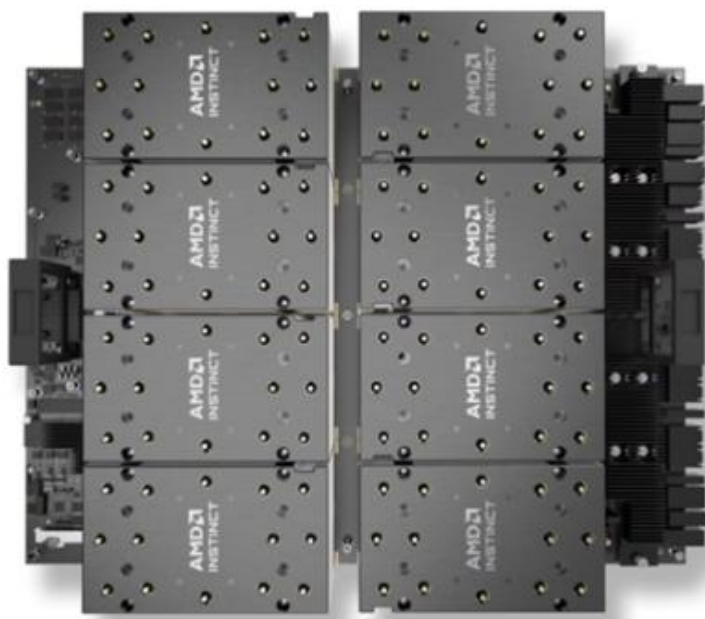
When replacing a system board, GPU board, or switch board in the SR685a V3, it is recommended that you take pictures of the cable routing before disconnecting anything. For more information about SR685a V3 cable routing, refer to the Internal cable routing section of the SR685a V3 User Guide on [Lenovo Docs](#).



GPU board replacement tips

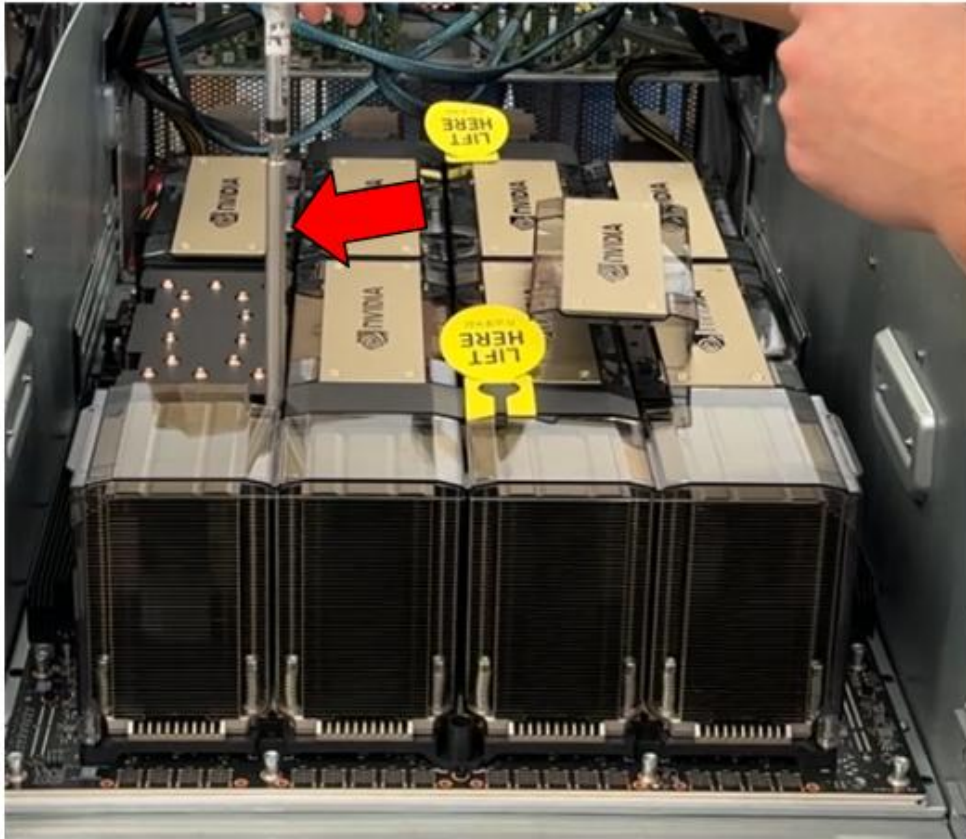
If an AMD GPU board fails and needs to be replaced, replace the GPU complex (GPU board with all eight GPUs installed). Do not return an AMD GPU board without all eight GPU modules installed.

This rule only applies to the AMD GPU board. To replace an NVIDIA GPU board, you should first remove all eight NVIDIA GPU modules. Do not return an NVIDIA GPU board with GPUs installed.



NVIDIA GPU and heat sink module replacement tips

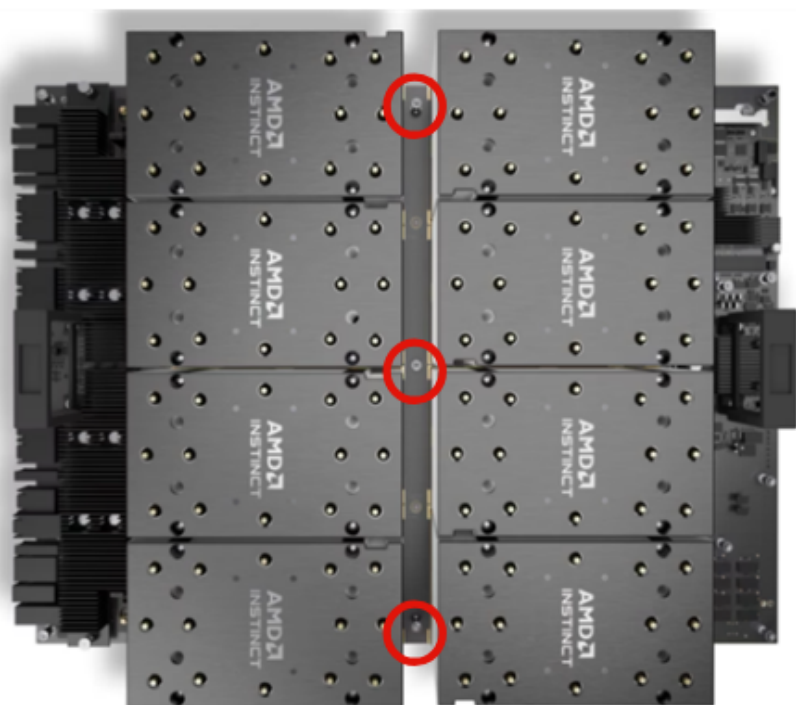
When replacing an NVIDIA GPU and heat sink module, you will need a Torx T15 6-inch extension bit (FRU number: 03NA603) to reach the screws on the module.



A Torx T15 6-inch extension bit

AMD GPU complex replacement tips

When replacing an AMD GPU complex, you will need a Torx T15 6-inch extension bit (FRU number: 03NA603) to reach some of the screws between the front and rear GPU modules.

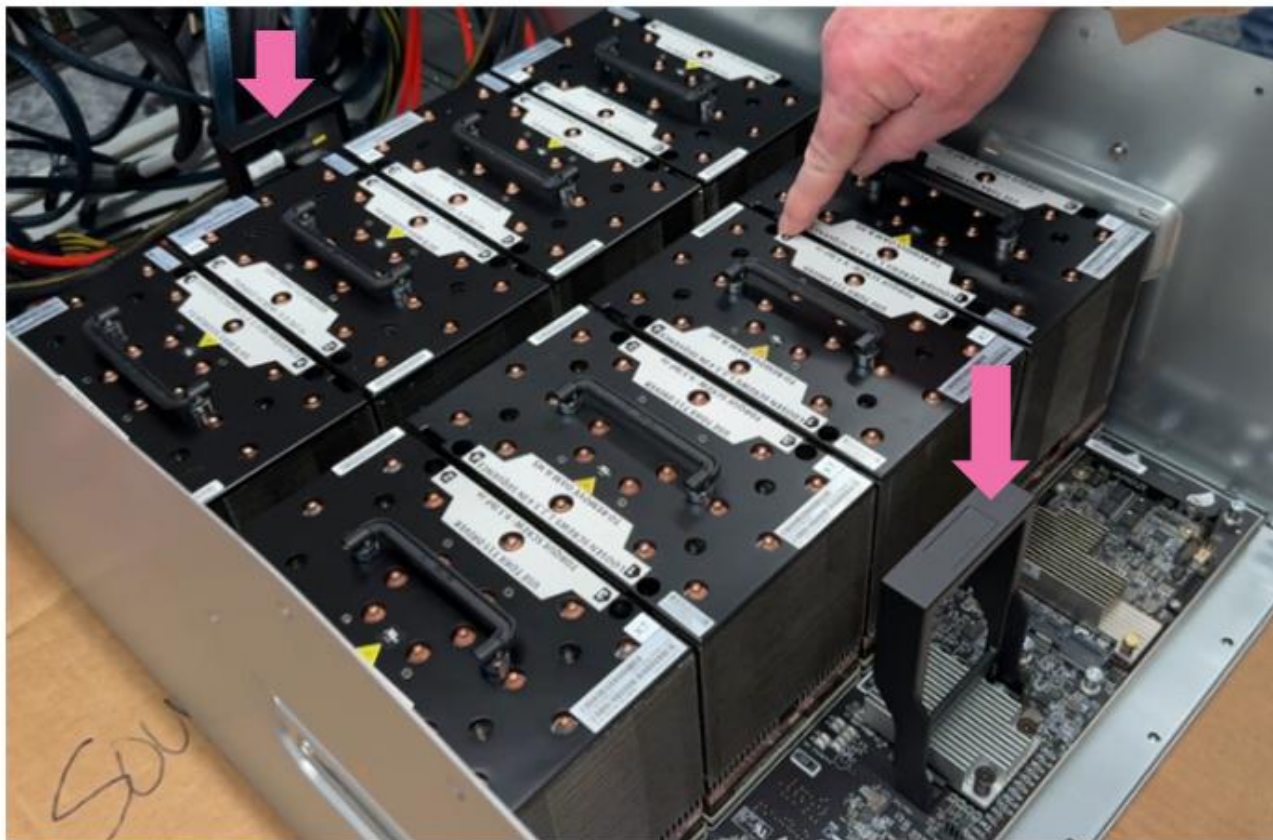


A Torx T15 6-inch extension bit

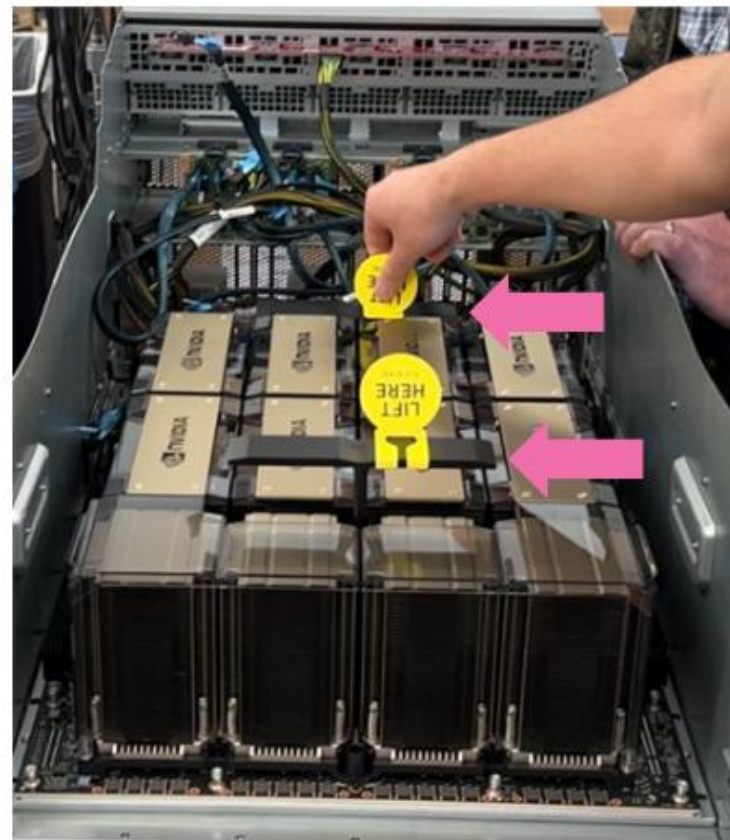
AMD GPU complex – the screws need to be fastened/unfastened with a Torx T15 screwdriver with extension bit

GPU complex handles

To replace an AMD or NVIDIA GPU complex, unfasten the screws and then hold the handles to replace the GPU complex. Do not hold the edge of the GPU heat sinks or the GPU board.



AMD GPU complex handles



NVIDIA GPU complex handles

Summary

This course enabled you to:

- Describe the ThinkSystem SR685a V3 and its components
- List the SR685a V3 specifications
- Describe the SR685a V3 configurations and block diagrams
- Describe the SR685a V3 management tools
- Describe the problem determination steps and explain how to troubleshoot issues with the SR685a V3