System configurations and diagrams

The SR645 system block diagram and hardware configurations

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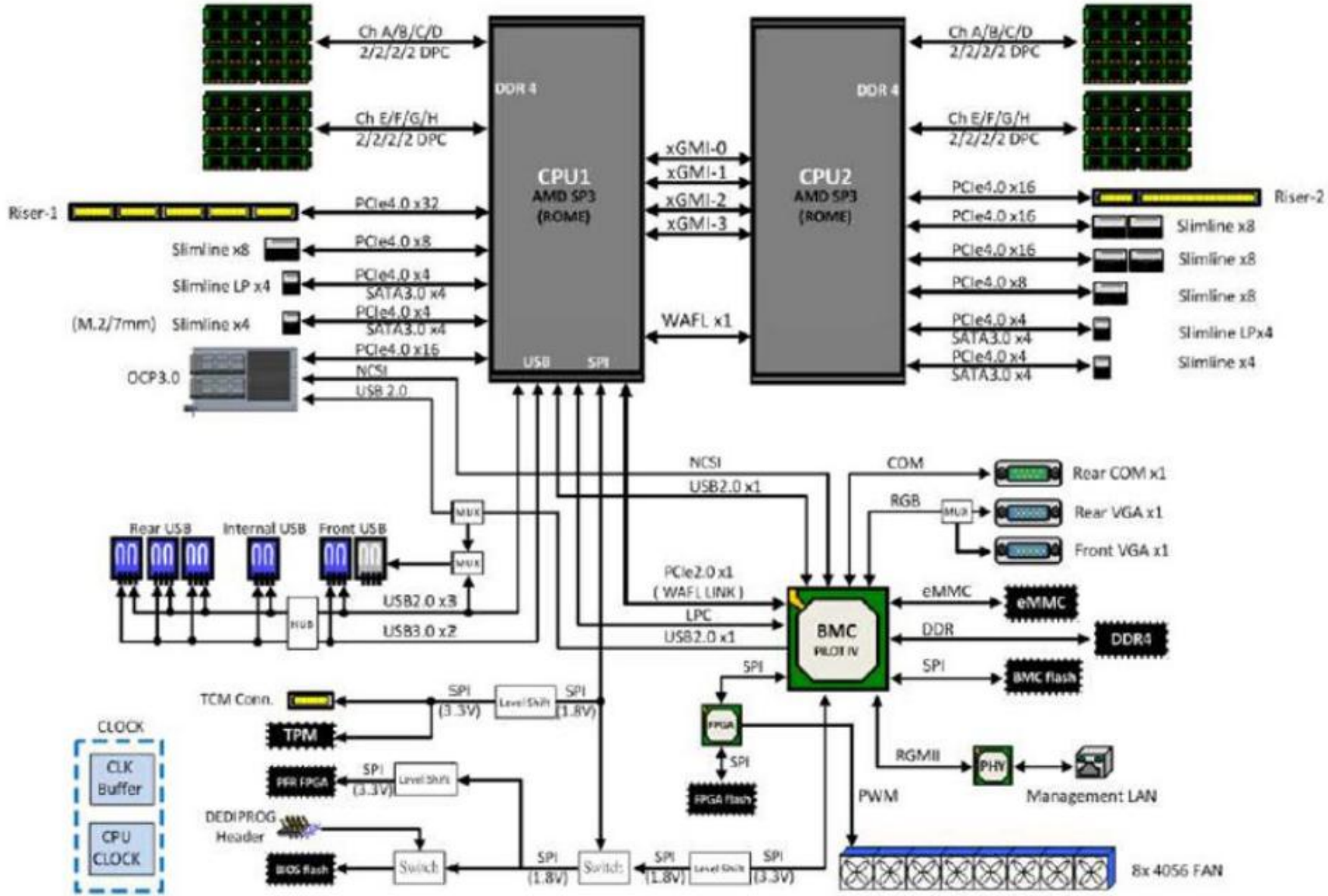
SR645 system block diagram



Drive bay configuration overview

- The SR645 supports 2.5-inch or 3.5-inch drive bays on the front.
- The SR645 supports 2.5-inch or 7mm drive bays on the rear.
- Drive bay expansion sequence: front → rear
- The rear 2.5-inch drive kit supports SAS/SATA drives only.
- The 10 2.5-inch AnyBay configuration does not support the rear drive kit.
- The M.2 SATA/NVMe and rear 7 mm SATA/NVMe drives support RAID 0 and RAID 1 configurations (if a RAID adapter has been installed). Use XCC to set up the RAID configuration for the rear 7 mm drives.
- The 2.5-inch and 3.5-inch NVMe drives do not support RAID configurations.

Drive configurations

Four 3.5-inch SAS/SATA or AnyBay drives

Four 2.5-inch SAS/SATA drives

Eight 2.5-inch SAS/SATA drives

Ten 2.5-inch AnyBay drives

Six 2.5-inch SAS/SATA drives + four AnyBay drives

Optional rear two 2.5-inch SAS/SATA or NVMe drive kit

or

Optional rear two 7mm SATA or NVMe drive kit

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Drive bay numbering

Front: Four 3.5-inch drives configuration

Front: Eight 2.5-inch drives configuration

Front: 10 2.5-inch drives configuration

Rear: Two 2.5-inch drives configuration

Rear: Two 7mm drives configuration

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PCIe adapter configuration

RAID adapter

- The SR645 supports current ThinkSystem 430, 440 Series HBA adapters, and 530, 930, and 940 Series RAID adapters.
- The dedicated CFF RAID adapter is installed between the fans and the front backplane. The SR645 supports up to one CFF RAID adapter and does not support the CFF expander adapter. Click **HERE** to see pictures of the CFF RAID adapter.
- If a 930-8i, 930-16i, or 940-16i CFF RAID adapter is installed, a super capacitor must be installed.
- For more information about RAID adapter installation rules, refer to the *ThinkSystem SR645 Setup Guide* on the Lenovo Support Web site.

GPU adapter

- The SR645 supports up to three GPU adapters.
- When the GPU adapters are installed, the rear drive assembly is not supported.

For the latest RAID and GPU adapters installation rules, refer to *ThinkSystem SR645 Maintenance Manual – Technical rules* section on Lenovo Support.

For the latest list of supported PCIe adapters, refer to ServerProven.

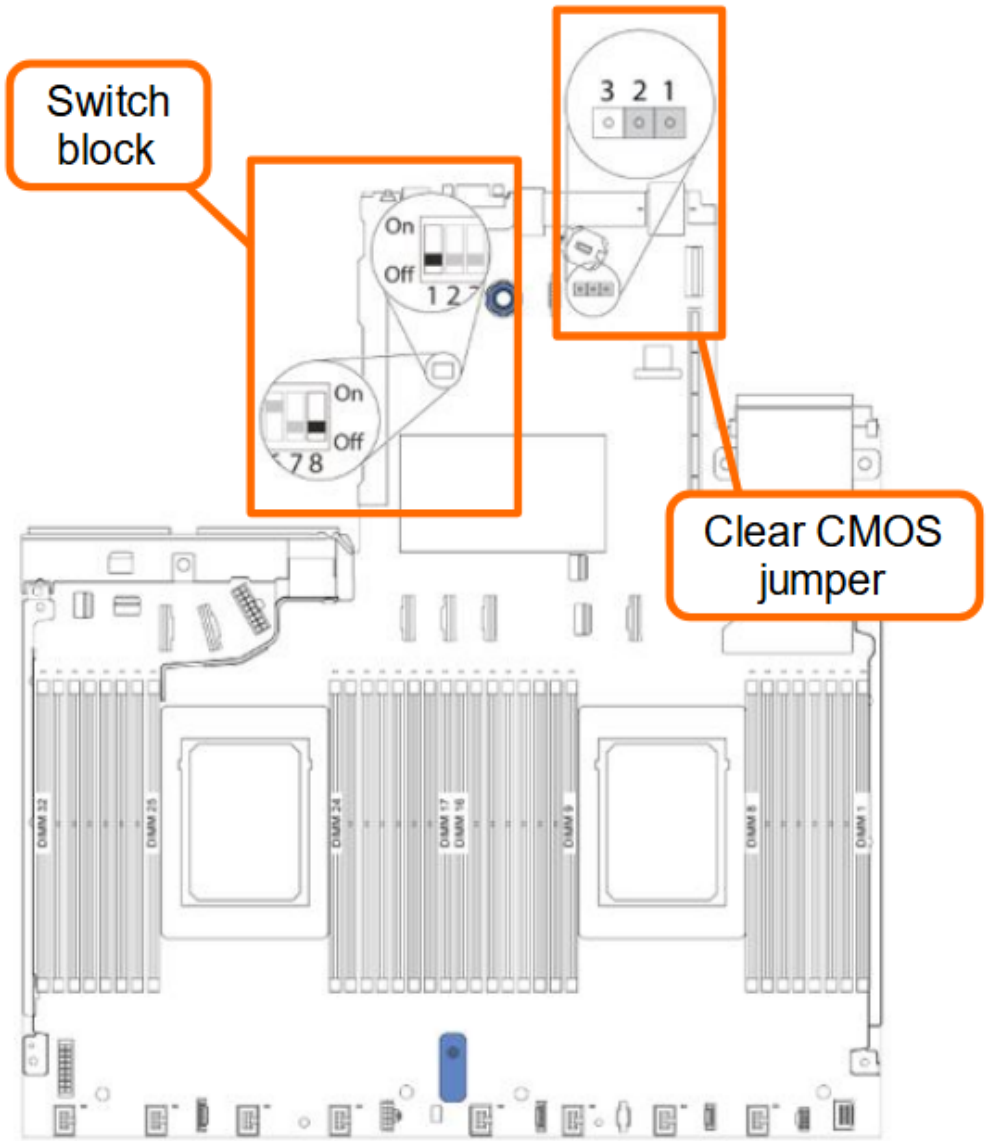
Note: The SR645 does not support onboard software RAID.

CPU limitations

The SR645 supports up to two CPUs. If only one CPU is installed, the system will have the following limitations:

- It cannot support CFF RAID adapters
- It cannot support rear 7 mm drives
- It cannot support PCIe riser 2
- It can only support up to eight onboard SATA drives
- It can only support up to four onboard NVMe drives

System board jumper and switch block



- There are no load backup XCC or UEFI jumpers on the system board. If an XCC or UEFI error occurs, the system will automatically load the backup firmware when the system restarts.
- Use the switch block to perform an XCC force update or other security-related actions.
- Use the clear CMOS jumper to clear the system's real-time clock (RTC) registry.
- Any system board jumpers not shown in the illustrations are reserved.
- For jumpers and switch block descriptions, refer to the *ThinkSystem SR645 Maintenance Manual – Switch block and jumper* section on Lenovo Support.