

SD650 V3 overview

Product features, technical specifications

Lenovo

ThinkSystem SD650 V3 product overview

The SD650 V3 server is a fifth-generation Neptune DWC platform. An SD650 V3 tray contains two CPU compute nodes mounted on a shared 1U tray with a water loop covering all the major heat sources in the nodes.



Features and specifications

Scroll down for more information

Features	Descriptions
Form factor	1U DWC tray with two nodes
Node type	Two CPU nodes
CPU	Two 4 th Gen Intel Xeon Scalable processors per node
GPU	No support
Storage	<ul style="list-style-type: none">• Up to two 2.5-inch 7 mm SATA/NVMe drives per node• Up to one 2.5-inch 15 mm SATA/NVMe drives per node• Up to one M.2 adapter per node
DIMM	<p>Sixteen DIMM slots per node</p> <ul style="list-style-type: none">• 32 or 64 GB ECC RDIMMs or 128 GB 3DS RDIMMs• Up to 1 TB of memory capacity with 64 GB RDIMMs• Up to 2 TB of memory capacity with 128 GB 3DS RDIMMs
Networking	<ul style="list-style-type: none">• A single 1 Gb Ethernet port with an RJ45 connector per node – shared between the operating system and Lenovo XClarity Controller (XCC)• Two 25 Gb SFP28 ports per node. One port is shared between the operating system and XCC
PCIe slots	Two PCIe 5.0 x16 slots with a low-profile form factor on the front of the CPU node

Note: For the latest specifications, refer to the SD650 V3 product guide on Lenovo Press: <https://lenovopress.lenovo.com/>

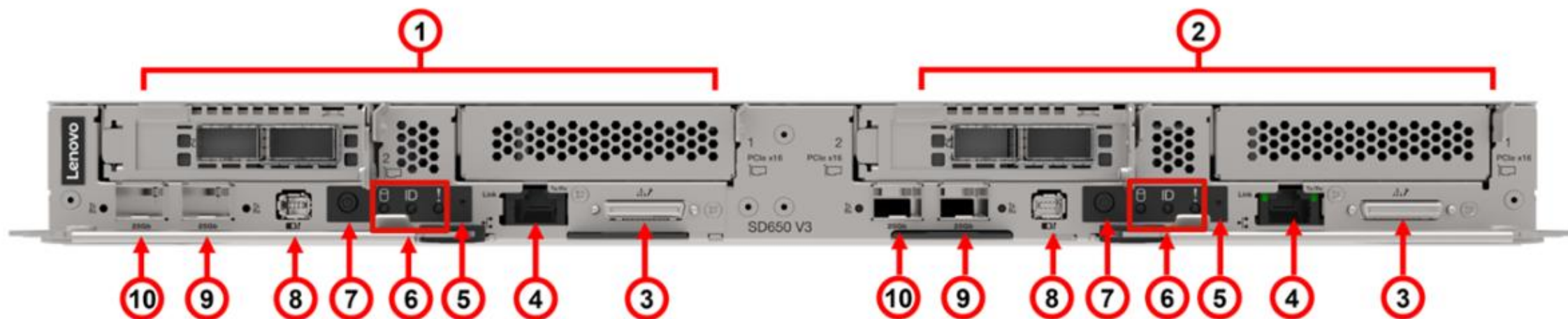
Features and specifications

Scroll down for more information

Features	Descriptions
Storage	<ul style="list-style-type: none">Up to two 2.5-inch 7 mm SATA/NVMe drives per nodeUp to one 2.5-inch 15 mm SATA/NVMe drives per nodeUp to one M.2 adapter per node
DIMM	<p>Sixteen DIMM slots per node</p> <ul style="list-style-type: none">32 or 64 GB ECC RDIMMs or 128 GB 3DS RDIMMsUp to 1 TB of memory capacity with 64 GB RDIMMsUp to 2 TB of memory capacity with 128 GB 3DS RDIMMs
Networking	<ul style="list-style-type: none">A single 1 Gb Ethernet port with an RJ45 connector per node – shared between the operating system and Lenovo XClarity Controller (XCC)Two 25 Gb SFP28 ports per node. One port is shared between the operating system and XCC
PCIe slots	Two PCIe 5.0 x16 slots with a low-profile form factor on the front of the CPU node
Management interface	<ul style="list-style-type: none">XClarity Controller 2 (XCC2) embeddedSupport for XClarity Essentials (LXCE)Support for XClarity Administrator (LXCA)Optional external diagnostics handset with an LCD display

Note: For the latest specifications, refer to the SD650 V3 product guide on Lenovo Press: <https://lenovopress.lenovo.com/>

ThinkSystem SD650 V3 front view



① Left compute node

② Right compute node

③ USB 3.0 console breakout cable connector

④ 1 Gb RJ45 Ethernet port with share-NIC feature for XCC

⑤ NMI button

⑥ Front operator panel LEDs

⑦ Node power button with LED

⑧ External diagnostic handset connector

⑨ 25 Gb SFP28 Ethernet port

⑩ 25 Gb SFP28 Ethernet port with share-NIC feature for XCC

ThinkSystem SD650 V3 front configurations



One PCIe network adapter and one drive tray per node configuration



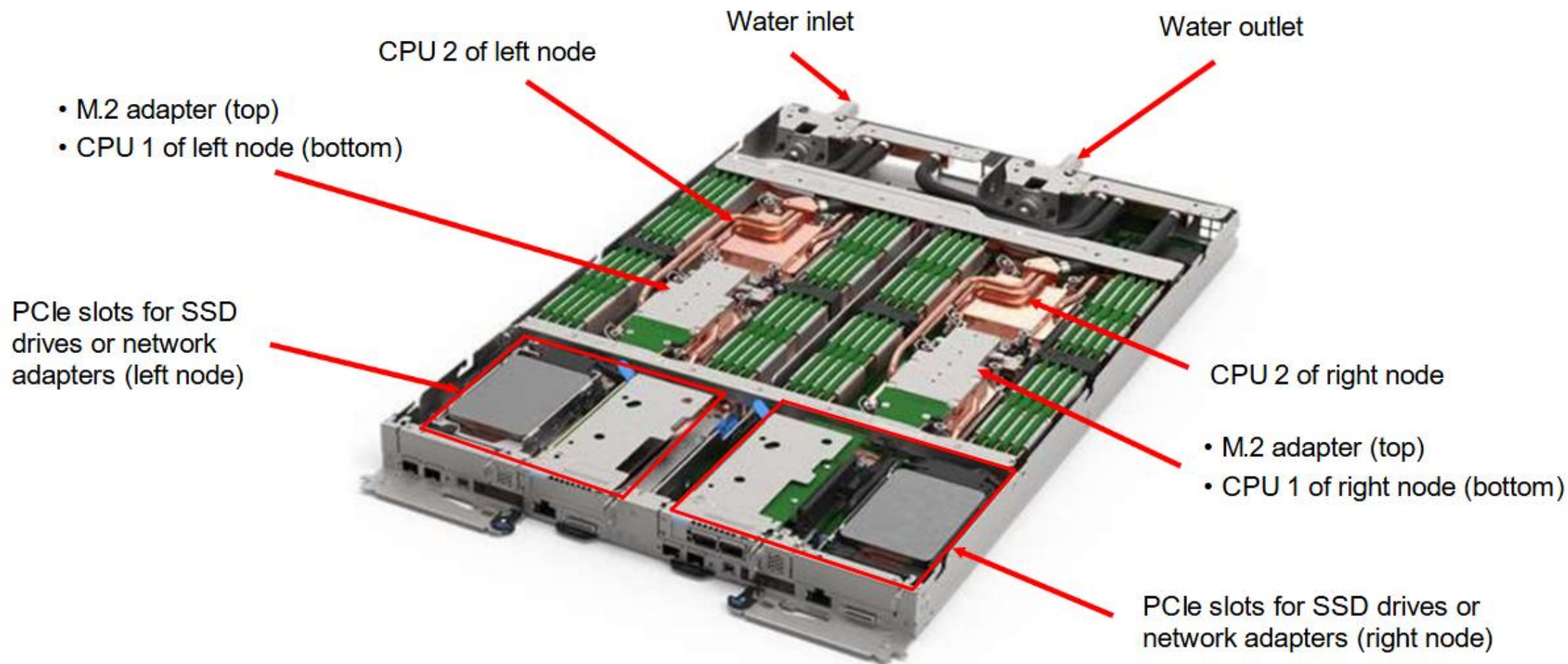
All PCIe network adapters configuration



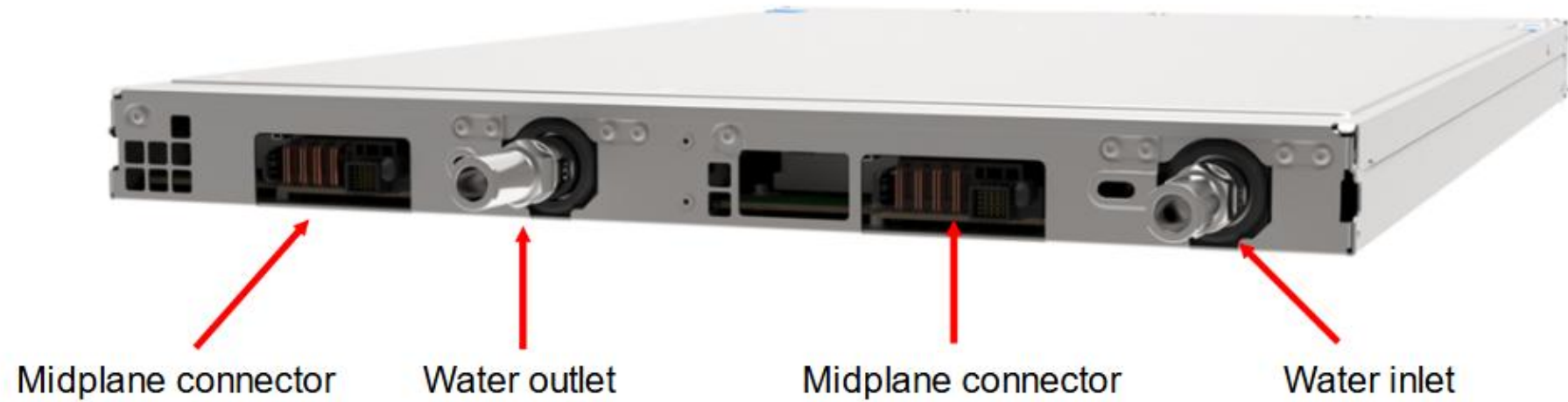
All SDD drives configuration

Note: SD650 V3 SSD drives are not hot swappable. Before replacing a drive, power off the node, remove the trays from the enclosure, and remove the top cover.

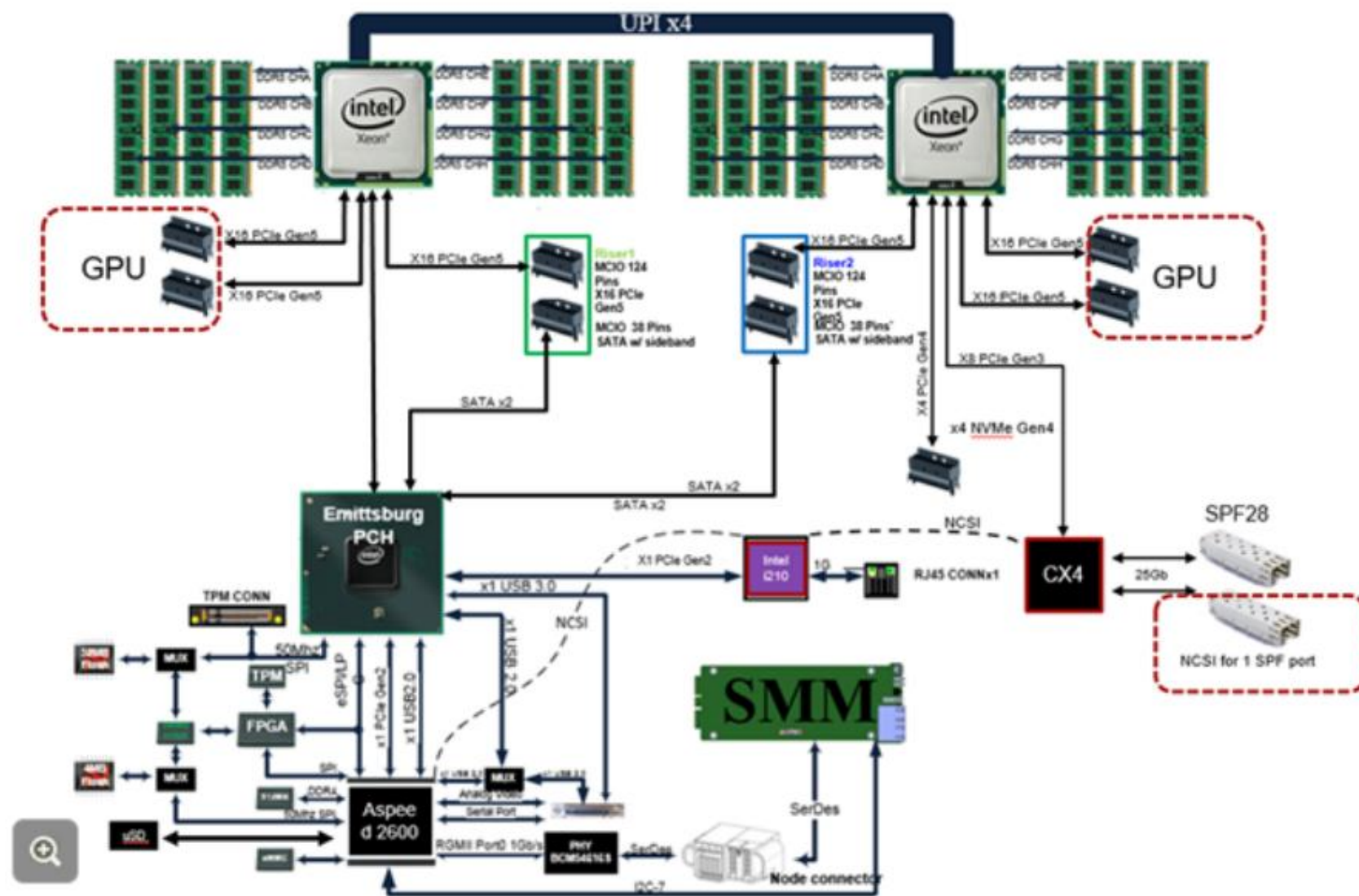
ThinkSystem SD650 V3 inside view



ThinkSystem SD650 V3 rear view



ThinkSystem SD650 V3 block diagram



ThinkSystem SD650 V3 breakout cable

The SD650 V3 supports a local console through a KVM breakout cable. The cable connects to the port on the front of each CPU node.

