

# SD535 V3 overview

Features and specifications

Lenovo

## ThinkSystem SD535 V3 product overview

The ThinkSystem SD535 V3 is a 1U node that supports a 4<sup>th</sup> Gen AMD EPYC processor (code name: Genoa). Up to four SD535 V3 nodes can be installed in the 2U D3 chassis.

ThinkSystem SD535 V3 machine types:

- 7DD1 (one-year warranty)
- 7DD8 (three-year warranty)



SD535 V3 node



Four SD535 V3 nodes in a D3 chassis

# Features and specifications

Features	Descriptions
Form factor	1U rack mount
CPU	<p>4<sup>th</sup> Gen AMD® EPYC™ processors, with 5 nm processor technology</p> <ul style="list-style-type: none"><li>• One processor with the new LGA 6096 (SP5) socket</li><li>• Up to 128 cores</li><li>• Up to 64 lanes of PCIe 5.0 per processor at 32 GT/s</li><li>• Maximum TDP: 400 W</li></ul>
Storage	Up to six hot-swap 2.5-inch SAS/SATA/NVMe drives
Memory	<ul style="list-style-type: none"><li>• Slots: 12 DIMM slots</li><li>• Memory module types:<ul style="list-style-type: none"><li>– 16GB TruDDR5 4800MHz (1Rx8) RDIMM-A</li><li>– 24GB TruDDR5 4800MHz (1Rx8) RDIMM-A</li><li>– 32GB TruDDR5 4800MHz (2Rx8) RDIMM-A</li><li>– 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM-A</li></ul></li></ul>

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Features	Descriptions
	<ul style="list-style-type: none"><li>– 32GB TruDDR5 4800MHz (1Rx4) 9x4 RDIMM-A</li><li>– 48GB TruDDR5 4800MHz (2Rx8) RDIMM-A</li><li>– 64GB TruDDR5 4800MHz (2Rx4) 9x4 RDIMM-A</li><li>– 64GB TruDDR5 4800MHz (2Rx4) 10x4 RDIMM-A</li><li>– 96GB TruDDR5 4800MHz (2Rx4) RDIMM-A</li><li>– 128GB TruDDR5 4800MHz (2S2Rx4) 3DS RDIMM-A v2</li><li>• Capacity:<ul style="list-style-type: none"><li>– Minimum: 16 GB (one 16 GB RDIMM)</li><li>– Maximum: 1536 GB (twelve 128 GB RDIMMs)</li></ul></li><li>• Speed:<ul style="list-style-type: none"><li>– The operating speed varies with specific processor models and UEFI settings</li><li>– Maximum speed: 4800 MT/s</li></ul></li></ul>
M.2 drive	<ul style="list-style-type: none"><li>• Up to two M.2 drives on the system board</li><li>• Up to two M.2 drives on the M.2 boot adapter</li></ul>

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M.2 drive	<ul style="list-style-type: none"><li>• Up to two M.2 drives on the system board</li><li>• Up to two M.2 drives on the M.2 boot adapter</li><li>• The solution supports M.2 drives with the following capacities:<ul style="list-style-type: none"><li>– SATA M.2 drives:<ul style="list-style-type: none"><li>• 240 GB</li><li>• 480 GB</li><li>• 960 GB</li></ul></li><li>– NVMe M.2 drives:<ul style="list-style-type: none"><li>• 960 GB</li><li>• 1.92 TB</li></ul></li></ul></li><li>• The following form factors for M.2 drives on the system board are supported:<ul style="list-style-type: none"><li>– 80 mm (2280)</li><li>– 110 mm (22110)</li></ul></li><li>• The following form factors for M.2 drives on the boot adapter are supported:</li></ul>

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	<ul style="list-style-type: none"><li>– M.2 SATA<ul style="list-style-type: none"><li>• 42 mm (2242)</li><li>• 60 mm (2260)</li><li>• 80 mm (2280)</li></ul></li><li>– M.2 NVMe<ul style="list-style-type: none"><li>• 80 mm (2280)</li><li>• 110 mm (22110)</li></ul></li></ul>
Network interface	Two or four connectors on the OCP 3.0 module
Expansion slots	<ul style="list-style-type: none"><li>• PCIe riser<ul style="list-style-type: none"><li>– One PCIe riser on the rear of the node: PCI Express 5.0 x16, HH/HL (single width)</li><li>– PCIe expansion slot can support a maximum 75 W PCIe adapter</li></ul></li><li>• OCP module<ul style="list-style-type: none"><li>– One OCP module slot</li></ul></li></ul>

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GPU	Up to one low-profile GPU adapter (75 W)
System fan	Four 4056 fans (40 x 40 x 56 mm)
Integrated functions and I/O connectors	<ul style="list-style-type: none"><li>• Lenovo XClarity Controller (XCC), which provides service processor control and monitoring functions, video controller, and remote keyboard, video, mouse, and remote drive capabilities</li><li>• One XCC system management port on the rear to connect to a systems-management network. This RJ-45 connector is dedicated to XCC functions and runs at 1 Gbps.</li><li>• Rear connectors:<ul style="list-style-type: none"><li>– A group of two or four Ethernet connectors on an OCP Ethernet adapter</li><li>– One Mini DisplayPort connector</li><li>– One XCC system management port</li><li>– One USB 3.2 Gen 1 connector</li><li>– One USB 2.0 connector with XCC system management</li></ul></li></ul>
RAID adapter	<p>Hardware RAID 0, 1, 10, 5, 50, 6, 60, 1 Triple, 10 Triple</p> <ul style="list-style-type: none"><li>• ThinkSystem RAID 9350-8i 2 GB Flash PCIe 12Gb Internal Adapter</li></ul>



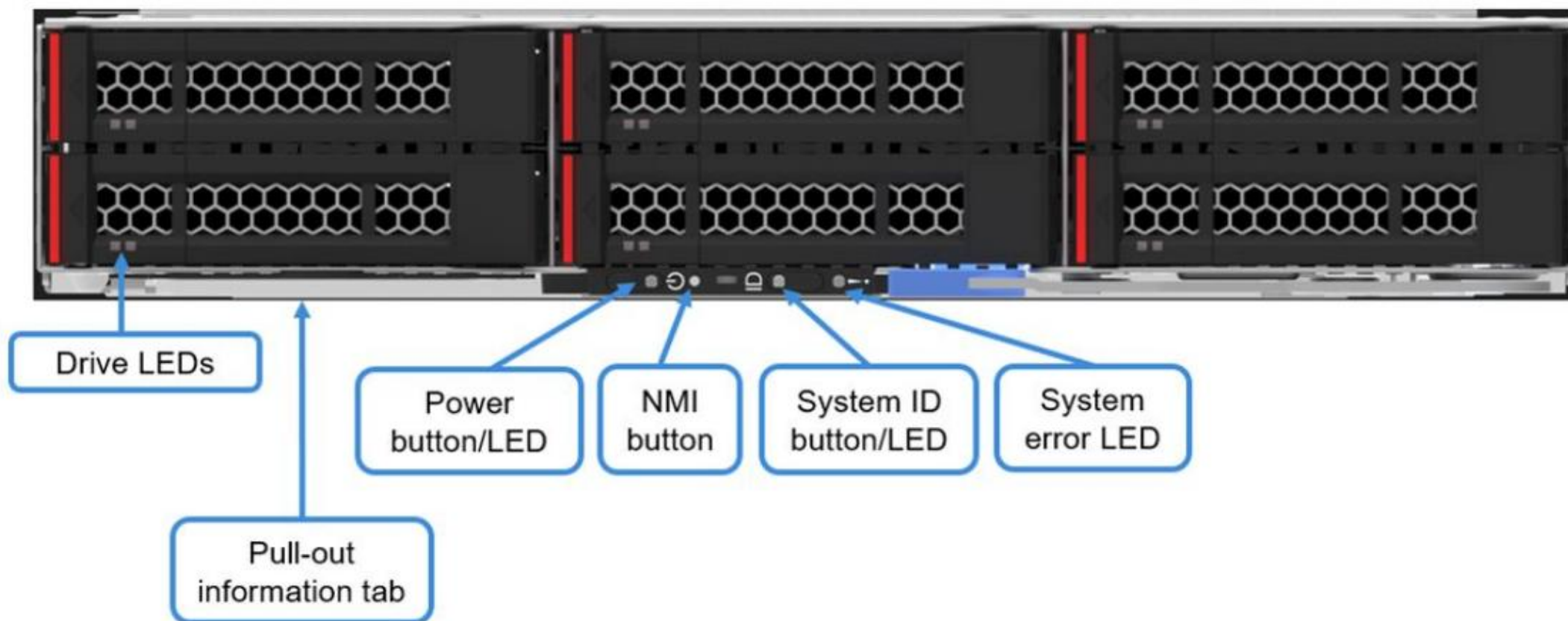
# Features and specifications

Features	Descriptions
	<ul style="list-style-type: none"><li>• ThinkSystem RAID 9350-8i 2 GB Flash PCIe 12Gb Internal Adapter</li><li>• ThinkSystem RAID 5350-8i PCIe 12 Gb Internal Adapter</li><li>• ThinkSystem RAID 540-8i PCIe 12 Gb Internal Adapter</li></ul>
Host bus adapter	<ul style="list-style-type: none"><li>• ThinkSystem 440-16e SAS/SATA PCIe Gen4 12 Gb HBA</li><li>• ThinkSystem 440-8e SAS/SATA PCIe Gen4 12 Gb HBA</li></ul>
Management interface	<ul style="list-style-type: none"><li>Lenovo XClarity Controller</li><li>Lenovo XCC Logger Utility</li><li>Lenovo XClarity Administrator</li><li>Lenovo XClarity Essentials toolset</li><li>Lenovo XClarity Provisioning Manager</li><li>Lenovo XClarity Integrator</li><li>Lenovo XClarity Energy Manager</li><li>Lenovo Capacity Planner</li></ul>

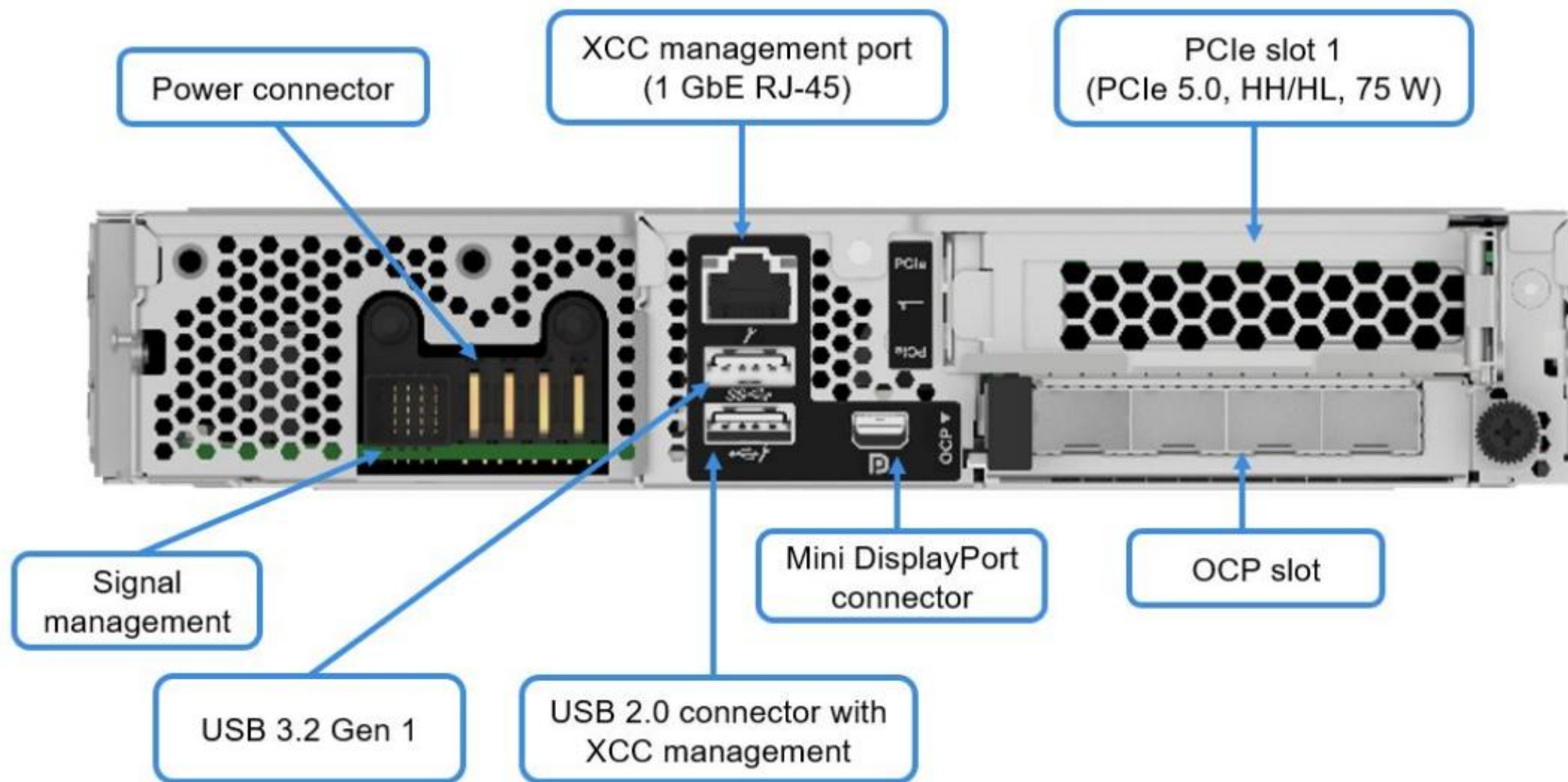


# Front view

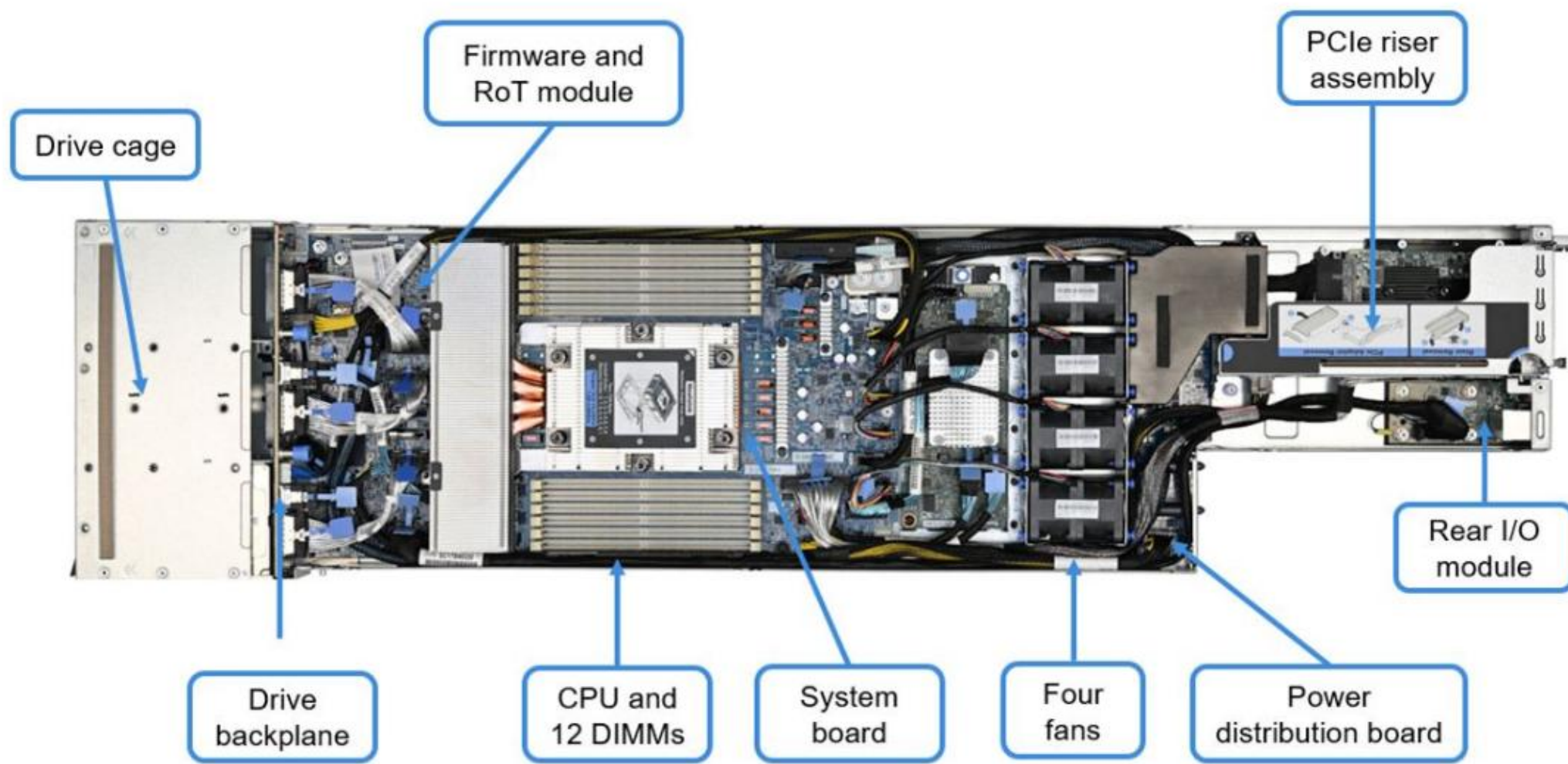
Six 2.5-inch SAS/SATA/NVMe SSDs



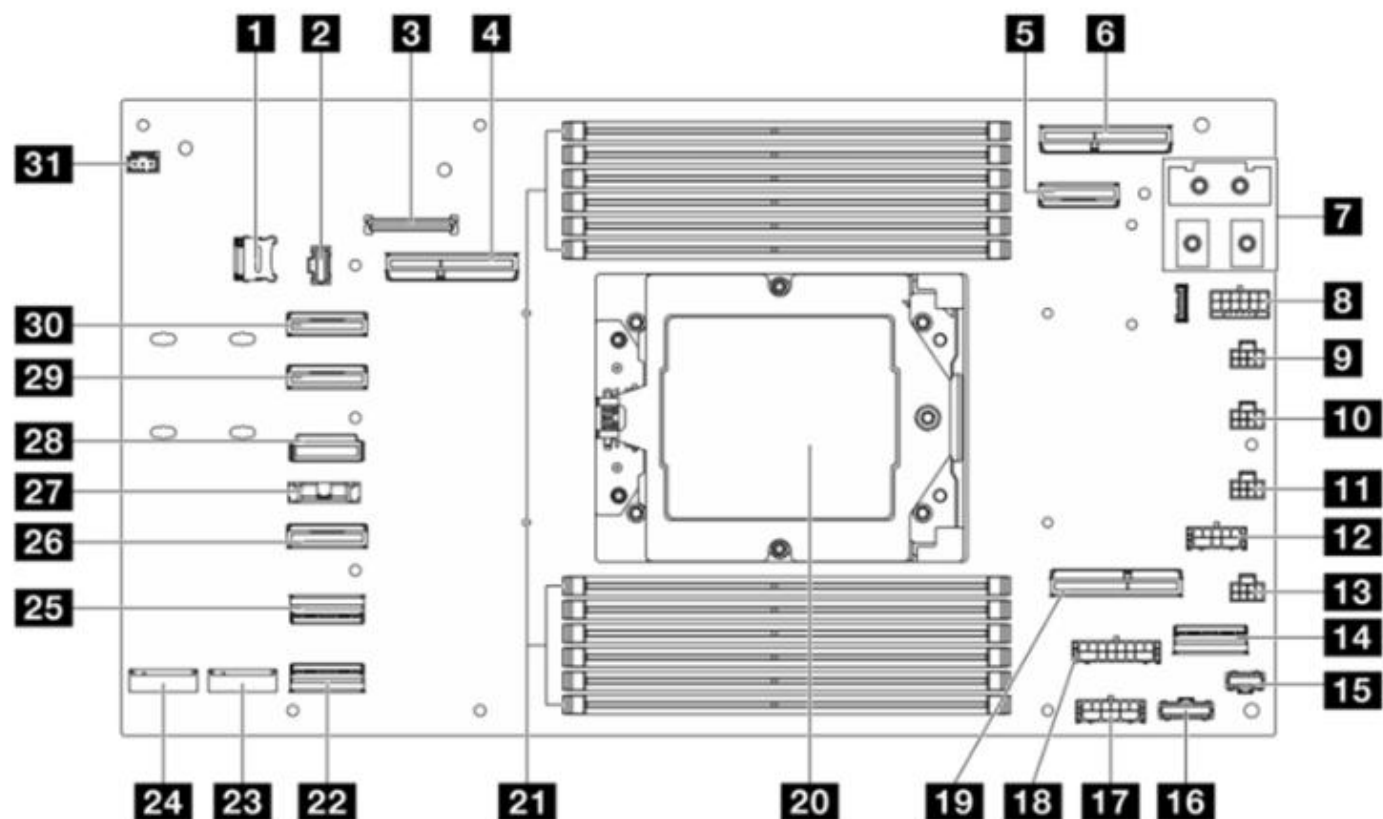
## Rear view



# Inside view



# System board layout



<b>1</b>	MicroSD card socket
<b>2</b>	Drive backplane or front I/O sideband connector
<b>3</b>	Firmware and RoT security module connector
<b>4</b>	(Reserved)
<b>5</b>	OCP power and sideband connector
<b>6</b>	OCP connector
<b>7</b>	Power bus bar connector
<b>8</b>	Drive backplane power connector
<b>9</b>	Fan 1 connector
<b>10</b>	Fan 2 connector
<b>11</b>	Fan 3 connector
<b>12</b>	Fan 4 connector
<b>13</b>	RAID power connector
<b>14</b>	RAID signal connector
<b>15</b>	M.2 boot adapter connector
<b>16</b>	PDB sideband connector
<b>17</b>	PDB auxiliary power connector
<b>18</b>	Riser power connector
<b>19</b>	Riser slot 1 connector
<b>20</b>	Processor socket
<b>21</b>	Memory module slots 1-12
<b>22</b>	Rear I/O connector
<b>23</b>	M.2 bay 2
<b>24</b>	M.2 bay 3
<b>25</b>	SATA 0-5 connector
<b>26</b>	NVMe 4-5 connector
<b>27</b>	CMOS battery socket
<b>28</b>	(Reserved)
<b>29</b>	NVMe 2-3 connector
<b>30</b>	NVMe 0-1 connector
<b>31</b>	Inlet temperature sensor connector