

Lenovo ThinkSystem Servers with 5th Gen AMD EPYC "Turin" Processors

Article

Lenovo is pleased to announce the support of the newest addition to the AMD EPYC family, the 5th Gen AMD EPYC 9005 series processors, formerly codenamed "Turin". These processors are supported on the ThinkSystem V3 servers that currently support the 4th Gen "Genoa" processors.



Figure 1. Lenovo ThinkSystem SR665 V3, now with support for 5th Gen AMD EPYC processors

5th Gen AMD EPYC

5th Gen AMD EPYC processors are built on the new Zen 5 cores, scaling all the way from 8 cores/16 threads up to 192 cores/384 threads. Performance-per-watt is a key feature of these new processors, which is especially useful to customers who are already running at full power capacity in their data centers, needing to find ways to implement AI solutions.

Security is another key focus area - becoming even more important in the AI era as data is moved outside the boundary of the CPU across PCIe lanes to GPUs and other devices. With the new Trust IO feature, expanding the trust domain to include these other devices is an essential step to further reduce attack surfaces and keep data safe.

These powerful Zen 5 cores extend performance leadership and enable AVX512 with a full 512-bit data path. 5th Gen AMD EPYC 9005 includes processors with peak frequencies of 5GHz, ideal for compute bound workloads in HPC, core-based licensed applications. They are an excellent companion processor for high-performance GPUs, enabling customers to maximum their GPU-accelerated infrastructure investments.

Processors in the EPYC 9005 series are divided into two groups, those with the Zen 5 design, and those with the Zen 5c design.

- Zen 5 processors are ideal for workloads needing the best possible per-core performance. This includes legacy applications that use fewer threads for their processing, or applications that have license limitations.
- Zen 5c processors have an increased core density, and offer the best power efficiency. They are best for containerized workloads a maximum scale.

ThinkSystem V3 server support

The following servers support the new 5th Gen AMD EPYC processors. Click the links to see the updated **data sheets**, **product guides**, and **3D Tours**.

- 1U rack servers:
 - [ThinkSystem SR635 V3 Server](#)
 - [ThinkSystem SR645 V3 Server](#)
- 2U rack servers:
 - [ThinkSystem SR655 V3 Server](#)
 - [ThinkSystem SR665 V3 Server](#)
- GPU-rich 3U rack server:
 - [ThinkSystem SR675 V3 Server](#)
 - [ThinkSystem SR685a V3 Server](#)
- Multi-node server:
 - [ThinkSystem SD535 V3 Server](#)
- Supercomputing servers:
 - [ThinkSystem SD665 V3 Neptune DWC Server](#)
 - [ThinkSystem SD665-N V3 Neptune DWC Server](#)

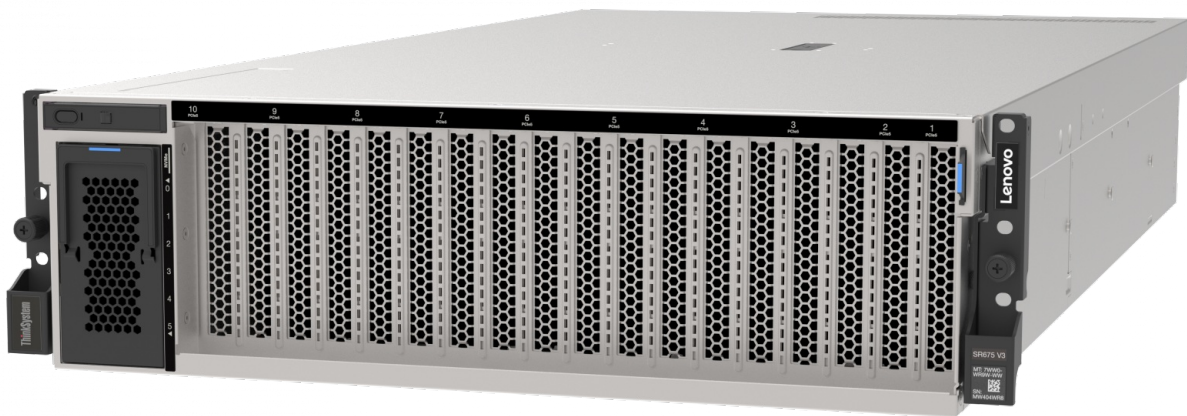


Figure 2. ThinkSystem SR675 V3 supporting 2x AMD EPYC processors and 8x double-wide PCIe GPUs

Processors specifications

Compare the specifications of all AMD EPYC processors in the following page:

- [AMD EPYC Processor Reference for Lenovo ThinkSystem Servers](#)

For more information

For more information on the new offerings, see the following resources:

- Lenovo launch page: [Unmatched Performance: AMD Thrives on Lenovo ThinkSystem](#)
- AMD launch page: [Advance Data Center AI with Servers Powered by AMD EPYC Processors](#)

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