ThinkSystem SR655 V3 Sets 4 World Records with New TPCx-AI Benchmark Result

Performance Benchmark Result

Lenovo has published a new TPCx-AI benchmark result that has set four world records. The result has been achieved on the powerful Lenovo ThinkSystem SR655 V3 server with a 5th Gen AMD EPYC processor. The benchmark results are:

- The world's #1 overall TPCx-AI v2.0 result for performance and price/performance at scale factor 3
- The world's best TPCx-AI v2.0 result for performance and price/performance on 1-processor systems at scale factor 3

TPCx-AI is an AI benchmark standard developed by the TPC to measure the performance of an end-to-end machine learning or data science platform. It focuses on emulating the behavior of representative industry AI solutions that are relevant in current production datacenters and cloud environments.

The ThinkSystem SR655 V3 server achieved the following score (1):

- **893.92 AIUCpm@3 (AI Use Cases per minute) @ $135.11 USD/AIUCpm@3**

Compared to other scale factor 3 TPCx-AI version 2 results, this result is:

- The highest performance ever published, 24% faster than Dell's PowerEdge R6715 result (2)
- The lowest price/performance ever published, 4.4% better price/performance than Dell's PowerEdge R6715 result (2)

The SR655 V3 achieved this record level of AI performance using the following configuration:

- 1x AMD EPYC 9575F 64-core processor at 3.3GHz
  (1 processor, 64 total cores, 128 total threads)
- 384 GB of Lenovo TruDDR5 memory
- Red Hat Enterprise Linux 8.10
- Anaconda Business

Results referenced are current as of January 30, 2026. To view all TPC results, visit www.tpc.org.

(1) The total solution availability for this TPCx-AI benchmark result is January 30, 2026. See the details for this result at https://www.tpc.org/5428.

(2) Dell PowerEdge R6715 TPCx-AI SF3 result details are from https://www.tpc.org/5423.

About the ThinkSystem SR655 V3

The Lenovo ThinkSystem SR655 V3 is a 1-socket 2U server that features the 5th Gen AMD EPYC "Turin" family processors. With up to 160 cores per processor and support for the new PCIe 5.0 standard for I/O, the SR655 V3 offers the ultimate 1-socket server performance in a 2U form factor. The server is ideal for dense workloads that can take advantage of GPU processing and high-performance NVMe drives.

The SR655 V3 server is a highly agile offering, supporting 31 different drive bay configurations utilizing the front, middle and rear locations of the server. It also includes 6 different slot configurations at the rear of the server. This adds flexibility to ensure that you can configure the server exactly the way your workload requires.

Combining performance and flexibility, the SR655 V3 server is a great choice for enterprises of all sizes. The server offers a broad selection of drive and slot configurations and offers high performance features that industries such as finance, healthcare and telco need. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design can improve your business environment and can help save operational costs.

About TPCx-AI

The TPCx-AI benchmark defines and provides a means to evaluate the performance of a general-purpose data science system that:

- Generates and processes large volumes of data
- Trains preprocessed data to produce realistic machine learning models
- Conducts accurate insights for real-world customer scenarios based on the generated models
- Can scale to large scale distributed configurations
- Allows for flexibility in configuration changes to meet the demands of the dynamic AI landscape.

The benchmark models real-life examples of companies and public-sector organizations that use a range of analytics techniques, both AI and more traditional machine learning approaches, as well as the potential application of these techniques in situations like those in which they have already been successfully deployed. In addition, the benchmark measures end to end time to provide insights for individual use cases, as well as throughput metrics to simulate multiuser environments for a given hardware, operating system, and data processing system configuration under a controlled, complex, multi-user AI or machine learning data science workload.

Learn more

To learn more about solutions for database and AI applications, please contact your Lenovo Sales Representative.

To find out more about TPC, visit http://www.tpc.org.

To learn more about the Lenovo ThinkSystem SR655 V3 server, visit the SR655 V3 product web page: https://www.lenovo.com/us/en/p/servers-storage/servers/racks/thinksystem-sr655-v3/len21ts0021

Related product families

Product families related to this document are the following:

- 1-Socket Rack Servers
- TPCx Benchmarks
- ThinkSystem SR655 V3 Server

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