



ThinkSystem SR850P SPEC CPU2017 Performance Measurements with Power Consumptions for All Preset Operating Modes

Performance Benchmark Result (withdrawn product)

SPEC CPU2017 rate int base performance benchmark scores and power consumptions were measured on ThinkSystem SR850P for all preset Operating Modes in January 2022.



Figure 1. Lenovo ThinkSystem SR850P

SPECrate2017 scores are ideal for measuring multi-threaded compute-intensive applications, such as High Performance Computing (HPC) workloads.

The ThinkSystem SR850P was configured as follows:

- Processors: 4x Intel Xeon 8280 processor - 28 cores, 2.70 GHz, 38.5 MB L3 cache
- 768 GB system memory – 24x 32GB Samsung 2Rx4 2933MHz
- SLES 15 SP2

The table below summarizes the results.

Table 1. SPECcpu results

UEFI preset Operating Mode	Minimal Power	Efficiency – Favor Power	Efficiency – Favor Performance (Default)	Maximum Performance
SPECrate_int_base	599	643	695	695
SPECrate_int_energy_base	738	712	661	660
SPECrate_int_base Max Power (Watts)	1112.1	1188.9	1305.9	1349.9
SPECrate_int_base Idle Power (Watts)	134.87	137.85	140.13	476.6

About the ThinkSystem SR850P

The Lenovo ThinkSystem SR850P is a 4-socket performance server that features a streamlined 2U rack design, optimized for price and performance, with best-in-class flexibility and expandability. The four processors in the SR850P are configured in a mesh configuration to maximize performance in multi-threaded applications. The ThinkSystem SR850P's agile design provides rapid upgrades for memory, and its large, flexible storage capacity helps to keep pace with data growth.

The ThinkSystem SR850P server supports four second-generation Intel Xeon Scalable Gold or Platinum processors. Built for standard workloads like general business applications and server consolidation, it can also accommodate high-growth areas such as databases and virtualization. The ThinkSystem SR850P's agile design permits rapid upgrades for memory, and its large, flexible storage capacity helps to keep pace with data growth. With the capacity to support up to 48 DIMMs, mix-and-match internal storage with up to 16 drives, and a dedicated slot for Gigabit or 10 GbE networking, the SR850P provides unmatched features and capabilities in a dense 2U rack-mount design.

About SPEC CPU2017

SPEC CPU 2017 is SPEC's industry-standardized, CPU intensive suite of benchmarks for measuring and comparing compute intensive performance, stressing a system's processor, memory subsystem and compiler. This benchmarks provides a comparative measure of compute-intensive performance using workloads developed from real user applications.

The SPEC CPU® 2017 benchmark suite measures server performance in the following ways:

- SPECspeed 2017 is to compare time for a computer to complete single tasks
- SPECrate 2017 is to measure the throughput or work per unit of time.

This benchmark is targeted for use by hardware vendors, IT industry, computer manufacturers, and government.

Related product families

Product families related to this document are the following:

- [SPECcpu Benchmark Results](#)
- [ThinkSystem SR850P Server](#)

Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service. Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

Lenovo (United States), Inc.
8001 Development Drive
Morrisville, NC 27560
U.S.A.
Attention: Lenovo Director of Licensing

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk. Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

© Copyright Lenovo 2024. All rights reserved.

This document, LP1565, was created or updated on March 9, 2022.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:
<https://lenovopress.lenovo.com/LP1565>
- Send your comments in an e-mail to:
comments@lenovopress.com

This document is available online at <https://lenovopress.lenovo.com/LP1565>.

Trademarks

Lenovo and the Lenovo logo are trademarks or registered trademarks of Lenovo in the United States, other countries, or both. A current list of Lenovo trademarks is available on the Web at <https://www.lenovo.com/us/en/legal/copytrade/>.

The following terms are trademarks of Lenovo in the United States, other countries, or both:

Lenovo®

ThinkSystem®

The following terms are trademarks of other companies:

Intel® and Xeon® are trademarks of Intel Corporation or its subsidiaries.

SPEC®, SPEC CPU®, SPECrate®, and SPECspeed® are trademarks of the Standard Performance Evaluation Corporation (SPEC).

Other company, product, or service names may be trademarks or service marks of others.