

SK hynix Obtains Industry's First Validation for 1anm DDR5 DRAM on the 4th Gen Intel® Xeon® Scalable Processor

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SK hynix Inc. →

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SEOUL, South Korea, Jan. 11, 2023 /PRNewswire/ -- SK hynix Inc. (or "the company", www.skhynix.com) announced today that its DDR5 product for servers using 1anm, the fourth generation of the 10nm process technology, has been validated on the 4th Gen Intel® Xeon® Scalable processor (formerly codenamed Sapphire Rapids) for the first time in the industry.

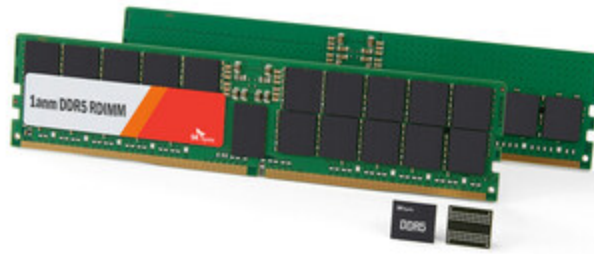
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SK hynix 1anm Server DDR5 DRAM_1

Netlist EX2069
Samsung v. Netlist
IPR2025-01431





SK hynix 1nm server DDR5 DRAM_2

"The validation of the 1nm DDR5 compatibility by Intel for its newest processor that supports DDR5 for the first time is monumental," SK hynix said. "We will seek a fast turnaround in the semiconductor memory industry by actively responding to the growing server market through DDR5, which is already in mass production."

The validation of the company's 1nm DDR5 product, which adopts 1nm technology using the EUV lithography process, is for 4th Gen Intel® Xeon® Scalable processors, Intel's latest server CPU launched on January 10th.

The 4th Gen Intel® Xeon® Scalable processor has been cited as a key to a turnaround in the industry, given that the launch of a next-generation server CPU requires server replacement and thus, results in a rapid increase in demand for high-performance memory chips. Experts predict that DDR5, expected to meet customers' such needs, will soon become the flagship product in the server DRAM market.

SK hynix's DDR5 delivers an outstanding performance per watt* and carbon emissions reduction effect to server customers as it reduces power consumption by up to 20% compared to DDR4, while boosting performance by 70% or more.

*Performance per watt: an indicator of how much computation is performed per watt of power consumed.

SK hynix also announced that its 1nm DDR5, the second generation of the 10nm process technology, has also successfully completed the validation of memory compatibility with Intel. SK hynix expects provision of various DDR5 products including 16Gb and 24Gb storage capacities to boost sales of server DRAM.



"The company is in close cooperation with a number of customers for wider adoption of DDR5 following the launch of the 4th Gen Intel® Xeon® Scalable processor and will strengthen its leadership in the ever-growing server market," said Sungsoo Ryu, Head of DRAM Product Planning at SK hynix.

"Intel has been working diligently with SK hynix, JEDEC and the industry to bring DDR5 to life from initial inception to the scalable, reliable memory subsystem at the heart of our latest processor technology," said Dr. Dimitrios Ziakas, Vice President of Memory and I/O Technologies at Intel. "The 4th Gen Intel® Xeon® Scalable processor takes advantage of DDR5 enhanced memory features to deliver the bandwidth, performance and scaling capacity needed by our data center customers across a vast array of workloads and applications."

Meanwhile, SK hynix, in collaboration with Intel, published a DDR5 white paper, which includes the features of DDR5 and the superior performance of the company's 1anm DDR5. The company expects the white paper to be used as a reference for server customers who plan to adopt SK hynix's DDR5 in the future.

<SK hynix DDR5 Development Timeline>

- Launch of industry's first DDR5 in Oct. 2020
- Shipment of industry's first 24Gb DDR5 samples in Dec. 2021
- Obtainment of industry's first Intel validation of 1a DDR5 for servers in Jan. 2023

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About SK hynix Inc.

SK hynix Inc., headquartered in Korea, is the world's top tier semiconductor supplier offering Dynamic Random Access Memory chips ("DRAM"), flash memory chips ("NAND flash") and CMOS Image Sensors ("CIS") for a wide range of distinguished customers globally. The Company's shares are traded on the Korea Exchange, and the Global Depository shares are listed on the Luxemburg Stock Exchange. Further information about SK hynix is available at www.skhynix.com, news.skhynix.com.

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