micron

128GB Server DRAM

For AI and deep learning

Micron DDR5 Server DRAM nearly doubles the performance of DDR4

Increase server and workstation performance by up to 85% with Micron DDR5 Server Memory¹. DDR5 technology relieves the bandwidth-per-core memory crunch to pull peak computing performance and runs more virtual machines, increasing the responsiveness of virtualized applications. DDR5 is expected to overtake DDR4 global memory shipments during the next few years⁵, marking a fast transition between the two technologies.

Reduce your power draw and speed up system performance

Save up to 24% of your memory power draw⁷ with 128GB RDIMMs to reduce data center power and cooling costs for better overall TCO. With 16% improved latency⁸ over 128GB 3DS RDIMMs, this memory option also provides a faster response time for server performance, such as during Al training and inference processing.

Best for



Artificial intelligence



Data mining



Predictive analytics



Intensive simulations

Key features

- Increase performance by up to 85% over DDR4¹
- Reach memory speeds up to 5,600MT/s⁶
- New higher RDIMM density of 128GB using single (monolithic) die packaging
- Optimized for the latest Intel® and AMD® server and workstation platforms
- · 3-year limited warranty³
- 100% component and module tested
- Operating voltage reduced to 1.1V from DDR4's 1.2V
- Manufactured by Micron®
- Available in RDIMM, ECC UDIMM and ECC SODIMM⁶
- Faster processing times for memory intensive applications²
- Higher bandwidths and better reliability, availability and scaling than DDR4¹
- Broad market enablement
- Tested and proven through Micron's DDR5 Technology Enablement Program (TEP)

Get more out of DDR5 servers with Micron Server Memory

Micron builds DDR5 server memory with power management integrated circuits (PMICs) on the module, which means you are not paying for power management for the entire system⁵. This can initially mean a lower overall cost to power DDR5 servers versus DDR4 when some system memory slots are left open. Micron Server Memory is high quality and is typically less expensive than OEM server memory.

High-performance memory for a new era of data centers

Micron DDR5 Server Memory delivers higher bandwidths along with improved reliability, availability, and scaling, when compared to DDR4. It's 100% component and module tested to mission-critical server standards and optimized for next-generation Intel® and AMD® DDR5 server and workstation platforms. As one of three major memory manufacturers, Micron tests and validates our DDR5 server memory to work with all major DDR5 server platforms.

Package	Single die package (SDP)	3D stacking (3DS) 128GB (2H) or 265GB (4H)	
Max RDIMM capacity ¹	128GB		
Latency	Lower than 3DS	Higher than SDP	
Cost/Gb	Lower than 3DS	Higher than SDP	



	One DIMM per channel		Two DIMMs per channel	
	Micron 128GB	Competition 128GB 3DS	2x Micron 128GB	2x Competition 128GB 3DS
Power (measured)	22% lower power		24% lower power	
Read latency (CL)	16.64ns (-13%)	19.14ns	16.30ns (-15%)	19.14ns
Micro-benchmark	+5%		+2% (low load)	+2% (high load)
Al natural language & Al-recommender	+1%		Equivalent	
In-memory database		+4%	Equivalent	
Database OLAP		+8%		+4%
Big data streaming/ spark analytics		+2%	Equivalent	

Micron® DDR5 server and workstation memory delivers more than a generational jump in speed and bandwidth, enabling the fastest high-performance systems for the new era of data centers.

Learn more at https://www.microncpg.com/serverDDR5

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Under memory-intensive workloads, DDR5 is designed to deliver 1.87x the bandwidth of DDR4 as a result of double the burst length, double the banks and bank groups, and significantly higher speed, as established by JEDEC, an independent organization that develops open standards for the microelectronics industry.
2. DDR5 data rate of 5,600MT/s transfers 1.75x (75%) more data than the maximum standard DDR4 data rate of 3,200MT/s. JEDEC projected speeds of 8,800MT/s are 2.75x

faster than DDR4's maximum standard data rate of 3,200MT/s.

^{3.} Warranty valid for three years from the original date of purchase. 4. Based on "Status of the Memory Industry 2022," Yole Group, May 2022.

^{5.} On DDR4 server memory, power management was on the motherboard instead of the module, powering empty slots as well as those in use. 6.5,600MT/s speeds available in all capacities for all module types.

^{7.} Achieved by lesser power consumed for idle and loaded latency vs. 128GB 3DS RDIMMs.

^{8.} Based on 128GB 3DS modules having a higher latency, per publicly available datasheets and JEDEC specifications as of April 2024.