NETLIST

Netlist Ultra Low Latency DDR5 RDIMM Agentic AI Servers and Workstations

JEDEC 1.1V Standard Operation

DIMM capacities: 32GB to 128GB

Lower Memory Latency for Faster Agentic AI

12 ns-class memory response | 6000–6400 MT/s | 32GB–128GB | Native 1.1V operation

Why Agentic AI Needs ULL Memory

Agentic AI systems do more than generate responses. They repeatedly retrieve context, reason, plan, call tools, update working memory, and coordinate tasks. These iterative operations create frequent CPU-to-memory accesses that can increase response time when the memory subsystem becomes a bottleneck.

Netlist LIGHTNING™ ULL DDR5 RDIMMs reduce memory response time to help shorten data-access delays, improve orchestration responsiveness, and sustain higher throughput in memory-sensitive AI pipelines. Benefits are strongest when retrieval, vector search, cache management, and host-side inference are on the critical path.

~12 ns
TRUE CAS LATENCY

5–10%
LOWER LOADED MEMORY LATENCY*

3–15%
ESTIMATED MEMORY-SENSITIVE UPLIFT*

AGENTIC AI MEMORY PRESSURE POINTS

- Context windows and agent working memory
- RAG retrieval and document processing
- Vector database search and ranking
- Planning, orchestration, and tool execution
- KV-cache metadata and host-side inference
- Multi-agent state sharing and coordination

ULL SYSTEM-LEVEL BENEFITS

- Faster access to context, vectors, and metadata
- Reduced CPU wait time after cache misses
- Lower latency across iterative reasoning loops
- Improved responsiveness for interactive agents
- Higher throughput for concurrent agent workflows
- More efficient use of CPUs and accelerators

High-Value Agentic AI Applications

Enterprise AI Assistants

Knowledge retrieval, workflow automation, customer and employee copilots

AI Development Workstations

Local inference, code agents, content creation, model evaluation

Autonomous Operations

IT operations, cybersecurity analytics, observability, incident response

Financial & Engineering Agents

Risk analysis, EDA, simulation, optimization, real-time decision support

*Estimated ranges. Actual results vary by processor architecture, platform qualification, BIOS, memory population, workload behavior, software stack, and overall system configuration.

LEARN MORE: EMAIL US AT SALES@NETLIST.COM OR VISIT NETLIST.COM/PRODUCTS
111 Academy Way, Irvine, CA 92617 | Phone: +1 (949) 435-0025

The Memory Storage Company™

© 2026 Netlist, Inc. All Rights Reserved. No part of this material may be reproduced, transmitted, or translated without permission of Netlist, Inc. Trademarks are the respective property of their owners.

This document is for informational purposes only. Netlist, Inc. makes no warranties of any kind with respect to the information in this document.

NETLIST

Netlist Ultra Low Latency DDR5 RDIMM Agentic AI Servers and Workstations

JEDEC 1.1V Standard Operation

DIMM capacities: 32GB to 128GB

Designed for the Agentic AI Data Path

1	2	3	4	5
RETRIEVE	**REASON**	**PLAN**	**ACT**	**REMEMBER**
Search files, vectors, databases, and enterprise knowledge	Access context, model state, and intermediate results	Build task sequences and select the next action	Call tools, APIs, applications, and infrastructure	Update working memory, history, and agent state

Product Highlights

PERFORMANCE AND COMPATIBILITY

- 12 ns-class true CAS latency
- Up to ~25% lower CAS latency vs. standard JEDEC DDR5-6400
- ULL timing profiles at 6000 and 6400 MT/s
- JEDEC-standard RDIMM form factor
- Native 1.1V operation with no CPU overclocking
- Designed for qualified Intel and AMD server/workstation platforms

ENTERPRISE DESIGN

- 32GB, 64GB, 96GB, and 128GB capacities
- x80 ECC RDIMM architecture
- Two independent 40-bit subchannels
- SPD Hub with I3C/I2C support
- Two or three onboard temperature sensors
- Advanced heat spreader and enterprise thermal management

DDR5 ULL RDIMM Specifications

FEATURE	DESCRIPTION
Data rate	6000–6400 MT/s
Voltage	1.1V native operation
Latency class	12 ns-class ULL
Capacity range	32GB–128GB
Architecture	ECC RDIMM; two 40-bit subchannels
Mechanical	JEDEC-standard 31.25 mm height
Temperature monitoring	Two or three sensors per DIMM
Environmental	0°C to 95°C; RoHS compliant; halogen-free

LEARN MORE: EMAIL US AT SALES@NETLIST.COM OR VISIT NETLIST.COM/PRODUCTS
111 Academy Way, Irvine, CA 92617 | Phone: +1 (949) 435-0025

The Memory Storage Company™

© 2026 Netlist, Inc. All Rights Reserved. No part of this material may be reproduced, transmitted, or translated without permission of Netlist, Inc. Trademarks are the respective property of their owners.

This document is for informational purposes only. Netlist, Inc. makes no warranties of any kind with respect to the information in this document.

NETLIST

Netlist Ultra Low Latency DDR5 RDIMM
Agentic AI
Servers and Workstations

JEDEC 1.1V Standard Operation

DIMM capacities: 32GB to 128GB

Ordering Information

Density	Organization	Speed	Latency	Part Number	Comments
32GB	2Rx8	6000Mbps	36-42-42 @1.1V	NLR5G0054G0760000HA	ULL
				NLR5G0054G0760000SQ	
64GB	2Rx4		36-42-42 @1.1V	NLR6G0054G0360000HA	
				NLR6G0054G0360000SQ	
96GB	2Rx4		36-42-42 @1.1V	NLRGG005EG0360000HM	
				NLRGG005EG0360000SQ	
128GB	2Rx4		36-42-42 @1.1V	NLR7G0055G0360000HM	
				NLR7G0055G0360000SQ	
32GB	2Rx8	6400Mbps	40-45-45 @1.1V	NLR5G0054G0764000HA	
				NLR5G0054G0764000SQ	
64GB	2Rx4		40-45-45 @1.1V	NLR6G0054G0364000HA	
				NLR6G0054G0364000SQ	
96GB	2Rx4		40-45-45 @1.1V	NLRGG005EG0364000HM	
				NLRGG005EG0364000SQ	
128GB	2Rx4		40-45-45 @1.1V	NLR7G0055G0364000HM	
				NLR7G0055G0364000SQ	

Note: System support and achievable timings depend on platform qualification, BIOS implementation, CPU memory controller capabilities, DIMM population, and thermal conditions. Contact Netlist for platform compatibility and specific part-number availability

LEARN MORE: EMAIL US AT SALES@NETLIST.COM OR VISIT NETLIST.COM/PRODUCTS
111 Academy Way, Irvine, CA 92617 | Phone: +1 (949) 435-0025

The Memory Storage Company™

© 2026 Netlist, Inc. All Rights Reserved. No part of this material may be reproduced, transmitted, or translated without permission of Netlist, Inc. Trademarks are the respective property of their owners.

This document is for informational purposes only. Netlist, Inc. makes no warranties of any kind with respect to the information in this document.