

# Challenges and Research Directions for Large Language Model Inference Hardware

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We highlight four promising research opportunities to improve *Large Language Model* inference for datacenter AI: *High Bandwidth Flash* for 10X memory capacity with HBM-like bandwidth; Processing-Near-Memory and 3D memory-logic stacking for high memory bandwidth; and low-latency interconnect to speedup communication. We also review their applicability for mobile devices.

## INTRODUCTION

When one author started his career in 1976, ~40% of the papers at computer architecture conferences were from industry. Their share fell below 4% at the 2025 International Symposium on Computer Architecture, suggesting a near disconnect between research and practice. To help restore their historic bond, we propose research directions that, if pursued, address some of the biggest hardware challenges that the AI industry faces.

**Large language model (LLM) inference is a crisis.** Rapidly improving hardware enables AI advances. Projections of inference chip annual sales are 4X-6X over the next 5-8 years.<sup>1</sup> While training demonstrates remarkable AI breakthroughs, the cost of inference determines economic viability. Companies find it costly to serve state-of-the-art models as usage of these models dramatically increases.<sup>2,3</sup>

**New trends make inference harder.** Recent advances in LLMs require more resources for inference:

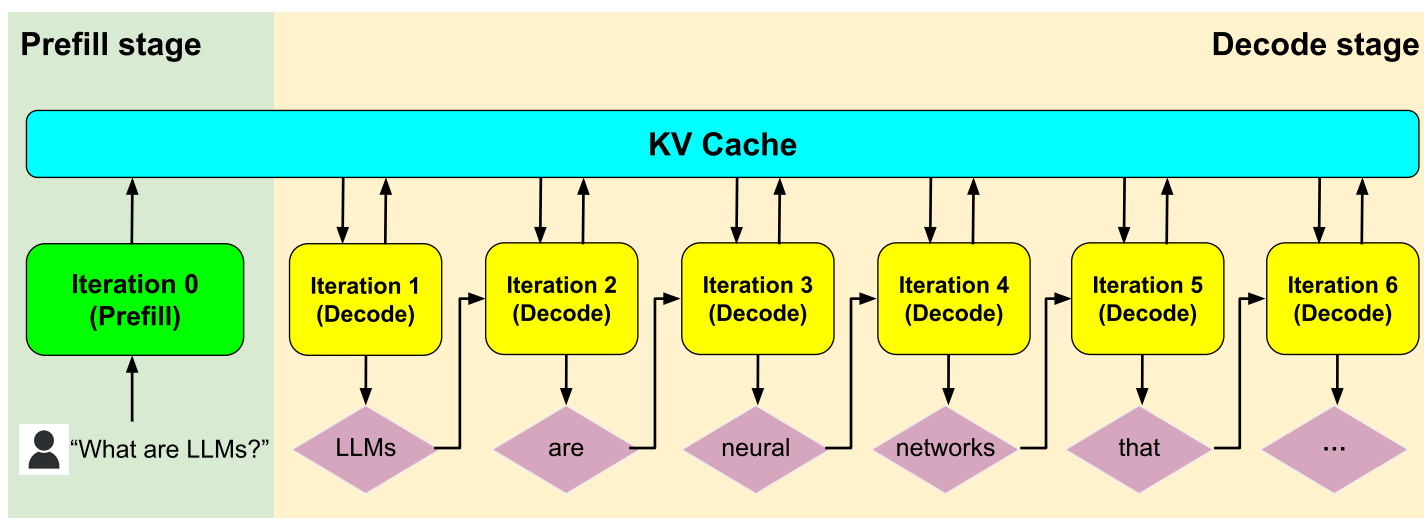
- **Mixture of Experts (MoE).** Rather than a single dense feedforward block, MoE uses tens to hundreds of experts—256 for DeepSeekV3—invoked selectively. This sparsity allows model size to grow significantly for higher quality, despite a modest increase in training cost. While helping training, MoE exacerbates inference by expanding memory and communication.
- **Reasoning models.** Reasoning is a think-before-act technique to improve quality. An extra “thinking” step generates a long sequence of “thoughts” before the final answer, similar to people solving a problem step-by-step. Thinking greatly increases generation latency, and the long sequence of thought tokens strains memory.
- **Multimodal.** LLMs have evolved from text to image, audio, and video generation. Larger data types demand more than text generation.
- **Long context.** A context window refers to the amount of information the LLM model can look at when generating an answer. Longer context helps quality, but increases compute and memory demands.
- **Retrieval-Augmented Generation (RAG).** RAG accesses a user-specific knowledge database to obtain relevant information as extra context to improve LLM results, increasing resource demands.
- **Diffusion.** In contrast to the autoregressive method that generates tokens sequentially, the novel diffusion method generates all tokens (e.g., an entire image) in one step and then iteratively denoises the image to reach desired quality. Unlike above, diffusion only increases compute demands.

The growing market and challenges of LLM inference suggest a great opportunity and need for innovation!

# CURRENT LLM INFERENCE HARDWARE AND ITS INEFFICIENCIES

We first review LLM inference basics and its primary bottlenecks on mainstream AI architectures, focusing on LLMs in the datacenter. LLMs on mobile devices have different restrictions and thus different options (e.g., HBM is infeasible).

LLMs, whose heart is Transformer, have two inference phases with very different characteristics: *Prefill* and *Decode* (Figure 1). Prefill is similar to training by processing all tokens of the input sequence simultaneously, so it is inherently parallel and often compute bound. In contrast, Decode is inherently sequential, as each step generates one output token (“autoregressive”), making it memory bound. The *Key Value (KV) Cache* connects the two phases, with its size proportional to the input+output sequence length. Although together in Figure 1, Prefill and Decode are not tightly coupled, and often run on different servers. Disaggregated inference allows software optimizations like batching to make Decode be less memory bound. A survey for efficient LLM inference reviews many software optimizations.<sup>4</sup>



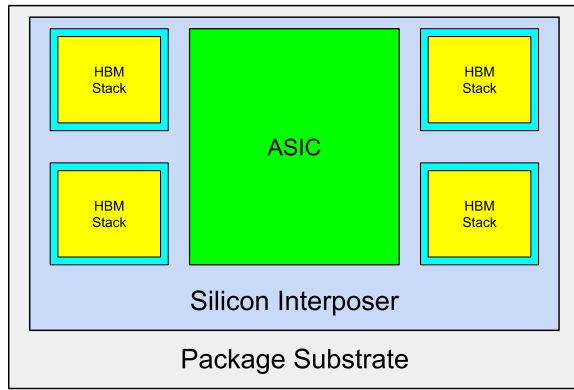
**Figure 1. The key processes of inference for the Transformer model that is the foundation of LLMs.**

GPUs and Google's Tensor Processing Units (TPUs) are popular datacenter accelerators for both training and inference. Historically, inference versions were scaled-down from training systems, such as with fewer chips or a smaller chip with less memory or performance. Thus far, no GPU/TPU was designed solely for LLM inference. Because Prefill is similar to training whereas Decode differs significantly, two challenges make GPUs/TPUs inefficient for Decode.

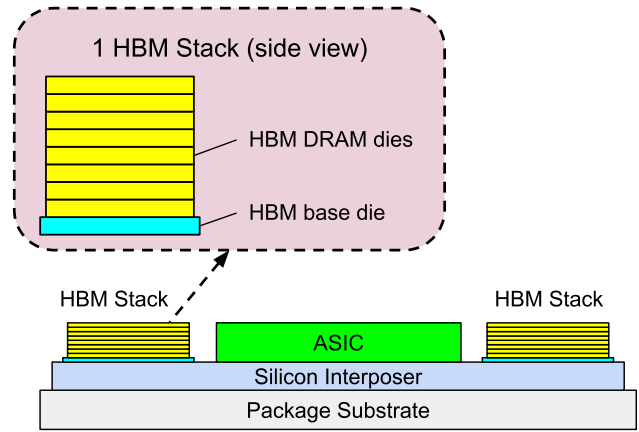
## Decode Challenge #1: Memory

The autoregressive Decode makes inference inherently memory bound, with new software trends heightening this challenge. In contrast, the hardware trends go in a completely different direction.

**AI processors face a Memory Wall.** Current datacenter GPUs/TPUs rely on *High Bandwidth Memory (HBM)*, and connect several HBM stacks to a single monolithic accelerator application specific integrated circuit (ASIC) (see Figure 2 and Table 1). Nevertheless, memory bandwidth improves more slowly than compute floating-point operations per second (FLOPS). For example, NVIDIA GPU 64-bit FLOPS rose by 80X from 2012 to 2022, but bandwidth grew only 17X. This gap will continue expanding.



(a) HBM (Top View)



(b) HBM (Side View)

Figure 2. (a) High Bandwidth Memory (HBM) package top view, (b) HBM side view.

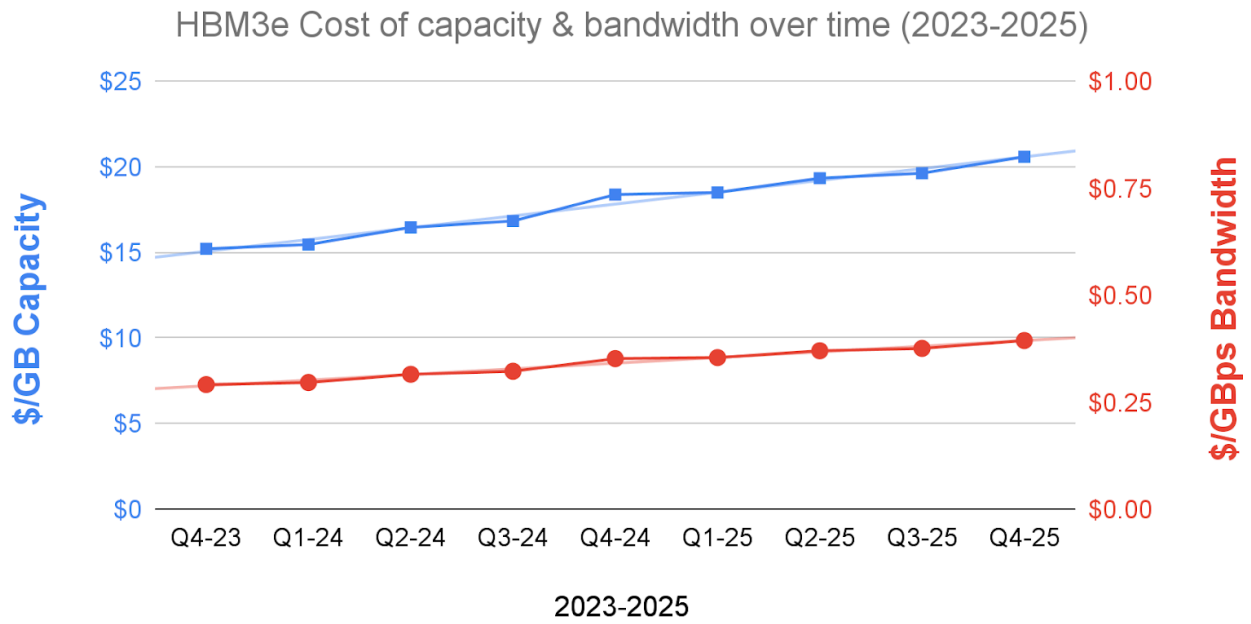
	HBM	HBM2	HBM2E	HBM3	HBM3E	HBM4
Year Introduced	2013	2016	2019	2022	2023	2026
Max pin bandwidth (gigabit/sec)	1.0	2.4	3.6	6.4	9.8	8
Number of pins	1024	1024	1024	1024	1024	2048
Stack BW (gigabyte/sec)	128	307	461	819	1254	2048
Max Number of dies/Stack	4	8	12	12	16	16
Max Capacity per die (gibibyte)	1	1	2	2	3	4
Max Stack Capacity (gibibyte)	4	8	24	24	48	64
NVIDIA GPU Generation		Volta V100	Ampere A100	Hopper H100	Blackwell B100	Rubin R100
HBM stacks/GPU		4	5	5	8	8

Table 1. Key features of six generations of HBM.

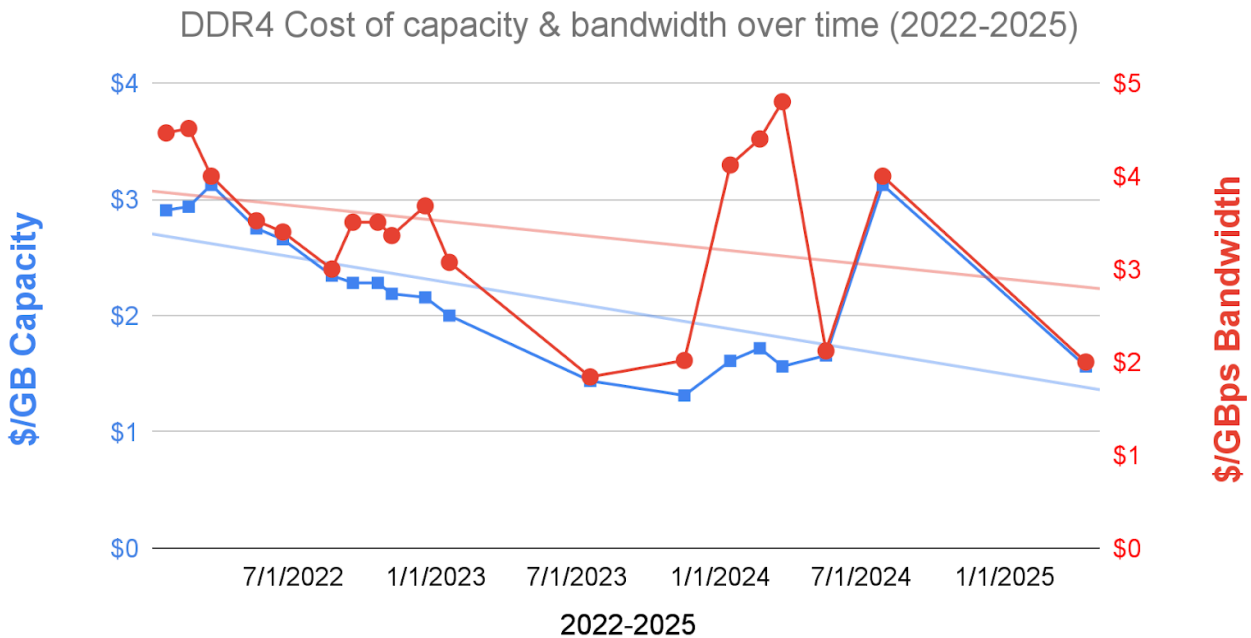
**HBM is increasingly expensive.** Looking at one HBM stack, the normalized price of capacity (\$/GB) and bandwidth (\$/GBps) *increases* over time. Figure 3(a) shows both grew 1.35x higher from 2023-2025.<sup>5</sup> This rise is because manufacturing and packaging difficulties increase with dies per HBM stack and Dynamic RAM (DRAM) density growth. In contrast, Figure 3(b) shows the equivalent costs for standard Double Data Rate (DDR4) DRAM *decrease* over time. From 2022-2025, capacity cost shrank to 0.54x and bandwidth cost to 0.45x. While prices of all memory and storage devices surged in 2026 due to unexpected demand, we believe long term that the diverging pricing trends of HBM and DRAM will hold.

**DRAM density growth is decelerating.** For an individual DRAM die, scaling is also worrisome. Fourfold growth from 8-gigabit DRAM dies that debuted in 2014 will take over 10 years. Fourfold gains occurred every 3-6 years previously.

**SRAM-only solutions are insufficient.** Cerebras and Groq tried using full reticle chips filled with SRAM to avoid DRAM and HBM challenges. (Cerebras even used wafer scale integration.) While plausible when the companies were founded a decade ago, LLMs soon overwhelmed on-chip SRAM capacity. Both had to later retrofit external DRAM.



(a) HBM increasing \$/GB capacity and \$/GBps bandwidth.



(b) DDR decreasing \$/GB capacity and \$/GBps bandwidth (Source: see Appendix)

**Figure 3. Cost per capacity and Bandwidth over time with trendlines for HBM (a) vs DDR (b).**

## Decode Challenge #2: End-to-End Latency

**User-facing implies low latency.** Unlike training that takes weeks, inference is tied to real-time requests, needing a response in seconds or less. Low latency is critical for user-facing inference. (Batch or offline inference does not have a low latency requirement.) Depending on the application, latency is measured as *time-to-completion* of all output tokens or *time-to-first-token*. Both have challenges:

- **Time-to-completion challenge.** Decode produces one token at a time, so the longer the output, the longer the latency. Long output sequences stretch latency, but long input sequences are also slower

because accessing the KV Cache during Decode and Prefill takes more time. Each Decode iteration has high memory access latency because it is memory bound.

- **Time-to-first-token challenge.** Long input sequences and RAG increase the amount of work before generation and hence the time-to-first-token. Reasoning models also increase this latency as they generate many “thought” tokens before the first user-visible token.

**Interconnect latency outweighs bandwidth.** Before LLMs, in datacenter inference usually ran on one chip, while training needed a supercomputer. The supercomputer interconnect understandably aimed much more at bandwidth than latency. LLM inference changes the game:

- Because of big weights, LLM inference now needs a multi-chip system, with software sharding that implies frequent communication. MoE and long sequence models further increase the system size to accommodate larger memory capacity requirements.
- Unlike training, the size of network messages is often small, given the small batch size of Decode. Latency trumps bandwidth for frequent, small messages in a big network.

Table 2 summarizes the main challenges of Decode inference. Only Diffusion needs increased compute—relatively easy to deliver—as it is fundamentally unlike Transformer Decode. Thus, we focus on promising directions for improving memory and interconnect latency but not compute. The last four rows are research opportunities to fulfill these needs, covered next.

	LLM Decode features & trends + Promising research opportunities	Memory capacity	Memory bandwidth	Interconnect latency	Compute
Drivers of hardware improvements	Conventional Transformer Decode		✓	✓	
	MoE	✓	✓	✓	
	Reasoning models	✓	✓	?	
	Multimodal	✓	✓	?	
	Long-context	✓	✓	?	
	RAG	✓	✓	?	
	Diffusion				✓
Where promising directions can help	① High Bandwidth Flash	✓		⬆	
	② Near Memory Compute		✓	⬆	
	③ 3D Compute-Logic Stacking		✓	⬆	
	④ Low-Latency Interconnect			✓	

**Table 2. Summary of primary hardware bottlenecks for LLM inference and research directions to address them.** “✓” means primary bottlenecks. In the top section of the table (hardware improvement drivers), “?” means a derived interconnect bottleneck for the drivers. For example, if reasoning models require a larger system to fulfill the memory requirements, it puts pressure on interconnect latency by increasing the hop count. Likewise, if an improvement on memory capacity or bandwidth allows inference of the same model with fewer accelerator chips, it would help lower interconnect latency. For the bottom section (promising directions), “⬆” means a promising direction that helps with interconnect latency by shrinking the size of the overall system, thereby reducing the hop count.

## FOUR RESEARCH OPPORTUNITIES TO RE-THINK LLM INFERENCE HARDWARE

Performance/cost metrics measure the efficiency of AI systems. Modern metrics—which emphasize realistic performance normalized, *Total Cost of Ownership (TCO)*, average power consumption, and *carbon dioxide equivalent emissions (CO<sub>2</sub>e)*—offer new targets for designing systems:<sup>6</sup>

- **Performance must be meaningful.** For LLM Decode inference, high FLOPS on a giant die does not necessarily mean high performance. Instead, we need to scale memory bandwidth and capacity efficiently, and optimize interconnect speed.
- **Performance must be delivered within datacenter capacity,** often constrained by power, space, and CO<sub>2</sub>e budgets.
- **Power and CO<sub>2</sub>e are first-order optimization targets.** Power affects TCO and datacenter capacity. Power and energy cleanliness determine operational CO<sub>2</sub>e. Manufacturing yield and life cycle set embodied CO<sub>2</sub>e.

Next, we describe four promising research directions to address the Decode challenges (bottom of Table 2). Although described independently, they are synergistic; an architecture can usefully combine many of them. All improve performance/TCO, performance/CO<sub>2</sub>e, and performance/power.

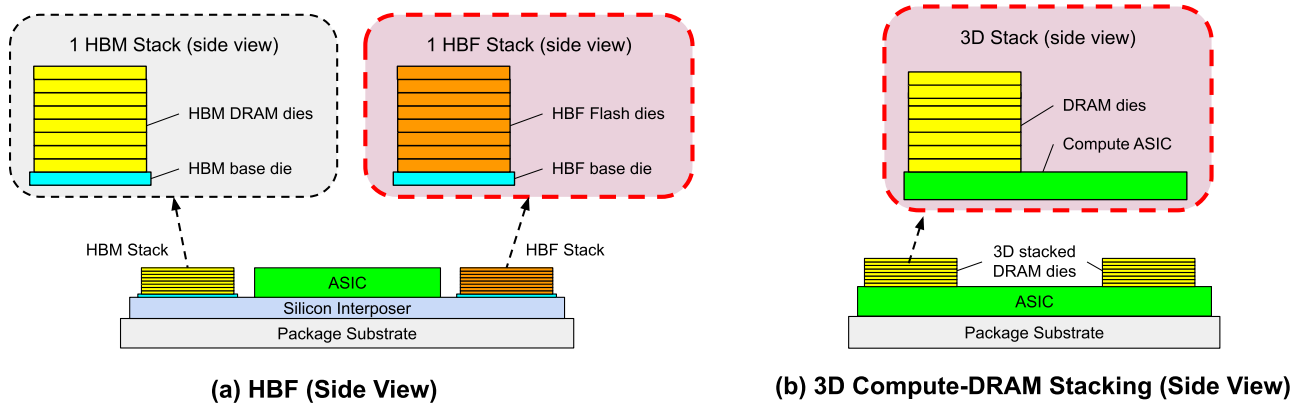


Figure 4. (a) High Bandwidth Flash (HBF) and (b) 3D Compute-logic Stacking

### ① High Bandwidth Flash for 10X capacity

*High Bandwidth Flash (HBF)* combines HBM bandwidth with flash capacity by stacking flash dies like HBM (Figure 4 (a)).<sup>7</sup> HBF delivers 10X memory capacity per node to reduce system size to save power, TCO, CO<sub>2</sub>e, and network overhead. Table 3 compares HBF to HBM and DDR and low power DDR (LPDDR) DRAM. The weaknesses of alternatives are bandwidth for DDR5, capacity for HBM, and write limits and high read latency for HBF. Another HBF benefit is sustainable capacity scaling; flash capacity continues to double every three years while, as mentioned above, DRAM growth decelerates.

Two well-known flash memory restrictions must be addressed:

- **Limited write endurance.** Write/erase cycles can wear-out flash. Therefore, HBF must hold infrequently-updated data, such as weights at inference time or slow-changing context.
- **Page-based reads with high latency.** Flash reads are at page granularity (10s KBs) with a latency substantially worse than DRAM (microseconds). Small reads reduce effective bandwidth.

These issues mean HBF cannot replace all HBM; a system still needs normal DRAM for data unsuitable for HBF.

	Capacity (GB)	Bandwidth (GB/s)	Power (Watt)	GBps per Watt	GB per Watt	Read latency (ns)	Bytes per read	Write endurance
1 HBF stack	512	1638 (read)	<80	>20.5	>6.4	1,000s	4096	low
1 HBM4-6400 stack	48	1638	40	41	1	10-100	32	high
1 DDR5-6400-64GB module	64	51	12	4	5	10-100	64	high
1 LPDDR5-6400-16GB module	16	51	3	17	5	10-100	64	high
1 Flash card	4096	4 (read)	50	0.1	82	10,000s	4096	low

**Table 3. A ballpark comparison of HBF, HBM, DDR, LPDDR, and flash.**

The addition of HBF enables exciting capabilities for LLM inference:

- **10X weight memory.** Weights are frozen during inference, so HBF 's 10X capacity could host many more weights—such as giant MoEs—to enable much bigger models than affordable today.
- **10X context memory.** Limited write endurance makes HBF infeasible for KV Cache data updated for every query or generation token. However, it works for a slow-changing context. For example:
  - A web corpus, used by LLM search, that stores billions of Internet documents.
  - A code database, used by AI coding, that stores billions of lines of code.
  - A paper corpus, used by AI tutoring, that tracks millions of research papers.
- **Smaller inference system.** Memory capacity determines the minimum hardware to hold a model. HBF downsizes the system, helping communication, reliability, and resource allocation.
- **Greater resource capacity.** HBF would reduce dependency on HBM-only architectures and alleviate the global shortage of mainstream memory devices.

HBF opens new research questions:

- How can software deal with limited write endurance and page-based, high-latency reads?
- What should be the ratio of traditional memory to HBF in a system?
- Can we reduce the constraints of HBF technology itself?
- How should HBF be configured for mobile devices versus for datacenters?

## ② Processing-Near-Memory for high bandwidth

*Processing-in-Memory (PIM)*, conceived several decades ago<sup>8</sup>, obtains high bandwidth by augmenting memory dies with small, low-power processors attached to memory banks. While PIM offers extraordinary bandwidth, key challenges are software sharding and memory-logic coupling. The former limits the number of software kernels that can run well on PIM. The latter hurts power and area efficiency of compute logic. In contrast, *Processing-Near-Memory (PNM)* is a technique that places memory and logic nearby but still uses separate dies. One version of PNM is 3D compute-logic stacking (see ③).

Unfortunately, some recent papers blur the distinction between PIM and PNM. They use PIM as a general term whether or not the compute logic is placed directly into the memory die. We go here with a simple but sharp distinction: PIM refers to designs where the processor and memory are in the same die and PNM means they are on nearby but separate dies. This distinction makes PIM and PNM unambiguous.

Hardware advantages are irrelevant if it's too hard for software to use, which is our experience for PIM and datacenter LLMs. Table 4 lists why PNM is better than PIM for LLM inference, despite weaknesses in bandwidth and power. Specifically, PIM requires software to shard memory structures of LLMs into many small

pieces that rarely interact to fit into 32-64MB memory banks; shards in PNM can be 1000x larger, making it much easier to partition LLMs with a low communication overhead. It is also unclear if the compute can be sufficient in PIM given the very limited budget for power and thermal of a DRAM technology process node.

	Processing-in-Memory (PIM)	Processing-Near-Memory (PNM)	Winner
Examples	Samsung HBM-PIM <sup>9</sup> SK Hynix GDDR-PIM <sup>10</sup> UPMEM logic die on DIMM <sup>11</sup>	Compute on HBM base die <sup>12,13</sup> AMD DRAM-logic 3D stacking <sup>14</sup> Marvell Structera CXL-PNM <sup>15</sup>	—
Data movement power	Very low (on-chip)	Low (off-chip but nearby)	PIM
Bandwidth (per Watt)	Very high (5X-10X of standard)	High (2X-5X of standard)	PIM
Memory-logic coupling	Memory and logic on one die	Memory and logic on separate dies	PNM
Logic PPA (performance, power, area)	Slower and higher-power logic if in a DRAM process	Logic in a logic process helps performance, power, and area.	PNM
Memory density	Worse since shared with logic	Not affected	PNM
Commodity memory pricing (per GB)	No. Lower volume, fewer suppliers, lower density vs memory w/o logic	Yes. Not affected	PNM
Power/Thermal budget	Logic has tight power and thermal budget on a memory die	Logic is less constrained by power and thermal limits	PNM
Software sharding	Bank parallelism needs sharding workloads to banks (e.g., 32–64 MB)	Less restrictive on sharding (e.g., 16–32 GB). No need to shard to memory banks	PNM

**Table 4. PIM versus PNM for datacenter LLM inference.**

While PNM is better than PIM for datacenter LLMs, the comparison is not as clear for mobile devices. Mobile devices are more energy-constrained and run LLMs with many fewer weights, shorter context, smaller data types, and smaller batch sizes due to a single user. These differences simplify sharding, reduce the compute and thermal need, making PIM weaknesses less problematic and so plausibly viable for mobile devices.

### ③ 3D memory-logic stacking for high bandwidth

Unlike 2D hardware, where memory IOs reside on the shoreline, 3D stacking (see Figure 4(b)) instead uses vertical *through silicon vias* (TSVs) to get a wide-and-dense memory interface for high bandwidth at low power.

3D memory-logic stacking has two versions:

1. **Compute-on-HBM-base-die** reuses HBM designs by inserting the compute logic into the HBM base die.<sup>12,13</sup> Because the memory interface is unchanged, bandwidth is the same as HBM, while power is 2–3X lower because of the shortened data path.
2. **Custom 3D** solutions enable bandwidth and bandwidth-per-watt higher than reusing HBM through using a wider-and-denser memory interface and more advanced packaging technologies.

Despite better bandwidth and power, 3D stacking faces challenges:

1. **Thermal.** Cooling a 3D design is harder than 2D as there is less surface area. One solution is to limit FLOPS of the compute logic by running at a low clock speed and voltage, as LLM Decode inference already has low arithmetic intensity.



2. **Memory-logic coupling.** An industry standard may be required for the memory interface of 3D compute-logic stacking.

3D stacking opens new research questions:

- The ratio of memory bandwidth to capacity or compute FLOPS is significantly different from existing systems. How can software adapt to it?
- Imagine a system with many memory types. How do we map LLMs efficiently?
- How to communicate with other memory-logic stacks and the main AI processor (if necessary)?
- What are tradeoffs in bandwidth, power, thermal, and reliability for various design choices, e.g., compute die placed on top vs bottom, the memory die count per stack, ...?
- How do these opportunities change for mobile devices versus datacenter LLM accelerators?

#### ④ Low-latency interconnect

Techniques ①–③ help latency as well as throughput: higher memory bandwidth reduces latency of every Decode iteration and higher memory capacity per accelerator chip reduces system size, saving communication overhead. Another promising latency direction for datacenters is to rethink the network latency-bandwidth tradeoff since inference is more sensitive to interconnect latency. For example:

- **High-connectivity topology.** Topologies with high connectivity—such as tree, dragonfly, and high-dimensional tori—require fewer hops, reducing latency. These topologies may diminish bandwidth but improve latency.
- **Processing-in-network.** Communication collectives used by LLMs—broadcast, all-reduce, MoE dispatch and collect—are well suited for in-network acceleration to improve both bandwidth and latency, e.g., a tree topology with in-network aggregation enables both low-latency and high-throughput all-reduce.
- **AI chip optimization.** The latency focus influences chip design with several possible optimizations:
  - Storing small arriving packets directly into on-chip SRAM instead of off-chip DRAM;
  - Placing the compute engine close to the network interface to reduce transportation time.
- **Reliability.** Codesigning reliability and interconnect can help both:
  - A local standby spare reduces system failures and the latency and throughput consequences of migrating the failed job to a new healthy node somewhere when there are no standby spares.
  - If perfect communication is unnecessary for LLM inference, one can reduce latency yet deliver satisfactory quality results by using fake data or a prior result when message timeout expires, rather than waiting for straggler messages to arrive.

## RELATED WORK

**High Bandwidth Flash.** SanDisk first proposed HBF, an HBM-like architecture for flash to overcome its bandwidth limit.<sup>7</sup> (SK Hynix later joined its development.) Microsoft researchers proposed a new class of memory that focuses on read performance and high density instead of write performance and retention time for AI inference.<sup>16</sup> While not specifically mentioned, HBF is a concrete example of the proposed new AI memory. Another research paper proposed integrating flash into mobile processors for on-device LLM inference enhanced with an LPDDR interface for the low bandwidth need of Prefill and Processing-Near-Flash for the high bandwidth need of Decode.<sup>17</sup>

**Processing-Near-Memory.** 3D compute-logic stacking has gained increasing attention as a technique for bandwidth higher than HBM, such as compute-on-HBM-base-die proposals<sup>12,13</sup> and an AMD concept<sup>14</sup>. In the non-3D space, Samsung AXDIMM<sup>9</sup> and Marvell Structera-A<sup>15</sup> attach processors to commercial DDR DRAM. The former integrated compute logic in the DIMM buffer chip. The latter leveraged the CXL interface for

improved programmability and ease of system integration. (A survey paper provides more examples of PNM/PIM.<sup>18</sup>) Many papers discuss using PIM/PNM in mobile devices, not the main focus of this paper.

**Low-latency interconnect.** Numerous papers describe low hop count network topologies including trees, dragonfly, and high-dimensional Tori. (This magazine's 20 reference limit prevents citation.) Examples of commercial processing-in-network are NVIDIA NVLink and Infiniband switches that support in-switch reduction, and multicast acceleration through SHARP (Scalable Hierarchical Aggregation and Reduction Protocol).<sup>19</sup> Similar capabilities for AI workloads appeared recently in Ethernet switches.<sup>20</sup>

**Software Innovations.** Besides this paper's focus on hardware innovations, there is a rich space of software-hardware codesign for algorithmic and software innovations to improve LLM inference. For example, a root cause is the autoregressive nature of Transformer Decode. A new algorithm that avoided autoregressive generation—such as Diffusion for image generation—could dramatically simplify AI inference hardware.

## CONCLUSION

The increasing importance and difficulty of inference for LLMs—which desperately need lower cost and latency—is an attractive research target. Autoregressive Decode is already a major challenge for memory and interconnect latency, which is exacerbated by MoE, reasoning, multimodal data, RAG, and long input/output sequences.

The computer architecture community has made great contributions on challenges when a realistic simulator was available, as it has previously for branch prediction and cache design. Since primary bottlenecks of LLM inference are memory and latency, a roofline-based performance simulator could be useful to provide first-order estimates in many scenarios. Additionally, such a framework should track memory capacity, explore various sharding techniques that are critical to performance, and use modern performance/cost metrics. We hope academic researchers will respond to this opportunity to accelerate AI research.

The current AI hardware philosophy—full-reticle die with high FLOPS, many HBM stacks, and bandwidth-optimized interconnect—is a mismatch to LLM Decode inference. While many researchers explore compute for datacenters, we recommend instead improving memory and network along four directions: HBF, PNM, 3D stacking, and low latency interconnect. Moreover, novel performance/cost metrics that focus on datacenter capacity, system power, and carbon footprint offer new opportunities versus conventional measures. Constrained versions of HBF, PNM, PIM, and 3D stacking also might work well for mobile device LLMs.

Such advances would unlock collaborative work towards important and urgent innovations that the world needs for delivering affordable AI inference.

## ACKNOWLEDGMENTS

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## APPENDIX: DDR DRAM PRICE 1957-2024

See subsequent pages attached. This data is from <https://jcmit.net/memoryprice>, collected by John C. McCallum. This web site is no longer available. McCallum's last posting was that he was getting older and needed to pass this data collection on to the next generation.

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Appendix for "Challenges and Research Directions for Large Language Model Inference Hardware" found in IEEE Computer. This data is from <https://jcmr.net/memoryprice>, collected by John C. McCallum. This web site is no longer available. McCallum's last posting was that he was getting older and needed to pass this data collection on to the next generation.

Memory Price History		C:/My Documents/Research/Memprice/memory.xls							copyright 2002, John C. McCallum		
X	Y	Date	Ref:	Page	Company	Size	Cost	Speed	Memory Type	JDR Chip Prices	
date	\$/Gbyte					KByte	US \$	nsec		Size	US\$
										Kbit	
1957	\$411,041,792,000	1957	Phister 366	366	C.C.C.	0.00098	392	10000	Flip-Flop transistor		
1959	\$67,947,724,800	1959	Phister 366	366	E.E.Co.	0.00098	64.8	10000	Flip-Flop - vacuum tube		
1960	\$5,242,880,000	1960	Phister 367	367	IBM	0.00098	5	11500	Core memory for IBM 1401		
1965	\$2,642,411,520	1965	Phister 367	367	IBM	0.00098	2.52	2000	Core Memory for IBM 360/30		
1970	\$734,003,200	1970	Phister 367	367	IBM	0.00098	0.7	770	Core Memory for IBM 370/135		
1973	\$399,360,000	1973 Jan	PDP8/e User Price List		DEC	12	4680		Core memory 8Kwords x 12 bit		
1974	\$314,572,800	1974	Phister 367	367	IBM	0.00098	0.3	800	IC Memory for IBM 370/125		
1975	\$421,888,000	1975 Jan	Radio-Electronics		MTS	0.25	103	1000	Altair 8800 256 Byte Static Board		
1975.08	\$180,224,000	1975 Feb			MTS	1	176		Altair 1K Static Board		
1975.25	\$67,584,000	1975 Apr			MTS	4	264		Altair 4K DRAM Board		
1975.75	\$49,920,000	1975 Oct			MTS	4	195		Altair 4K Static (2102) RAM Board		
1976	\$40,704,000	1976 Jan			MTS	4	159		Altair 4K Static (2102) RAM Board		
1976.17	\$48,960,000	1976 Mar			MTS	16	765		Altair 16K Static RAM Board		
1976.42	\$23,040,000	1976 Jun			SD Sales	4	90		SD Sales 4K Static Board		
1976.58	\$32,000,000	1976 Aug				8	250		8K Static RAM Board		
1977.08	\$36,800,000	1977 Feb			TDL	16	575		S-100 16K		
1978.17	\$28,000,000	1978 Mar				64	1750		S-100 64K		
1978.25	\$29,440,000	1978 Apr				16	460				
1978.33	\$19,200,000	1978 May				16	300				
1978.5	\$24,000,000	1978 Jul			Extensis	64	1500				
1978.58	\$16,000,000	1978 Aug				8	125				
1978.75	\$15,200,000	1978 Oct				32	475				
1979	\$10,528,000	1979 Jan	Interface Ag	124		32	329				
1979.75	\$6,704,000	1979 Oct			SD Sales - J	64	419		S-100, SD Sales/Jade 64K Kit		
1980	\$6,480,000	1980 Jan	Interface Ag	121		64	405				
1981	\$8,800,000	1981 Jan	Interface Ag	141		64	550				
1981.58	\$4,479,200	1981 Aug			Jade	64	279.95				
1982	\$3,520,000	1982 Jan	Interface Ag	135		256	880				
1982.17	\$4,464,000	1982 Mar	Microsystems			64	279				
1982.67	\$1,980,000	1982 Sep	BYTE		California D	256	495				
1983	\$2,396,000	1983 Jan	Interface Ag	153		256	599				
1983.67	\$1,980,000	1983 Sep	BYTE		California D	256	495				
1984	\$1,378,667	1984 Jan	BYTE	64		384	517				
1984.58	\$1,330,667	1984 Aug	BYTE	467	Advanced Com	384	499		IBM PC Board, 384K, \$199+6*50	256	79
1985	\$880,000	1985 Jan	BYTE	470	Do Kay	512	440		IBM 512K \$199.95+8*29.97		
1985.33	\$720,000	1985 May	BYTE	507	Do Kay	512	360		IBM 512K \$199.95+8*19.98		8.95
1985.42	\$550,000	1985 Jun	BYTE	505	Do Kay	512	275		IBM 512K \$149+8*15.75		5.95
1985.5	\$420,000	1985 Jul	BYTE	435	Fortron	512	210		IBM 512K \$119+7*13		5.95
1985.58	\$349,500	1985 Aug	BYTE	418	Jade	2048	699		2MB J-RAM-2 A&T \$699	256	3.95
1985.67	\$299,500	1985 Sep	BYTE	444	Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1985.83	\$299,500	1985 Nov	BYTE		Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1985.92	\$299,500	1985 Dec	BYTE		Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1986	\$299,500	1986 Jan	BYTE		Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1986.08	\$299,500	1986 Feb	BYTE		Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1986.17	\$299,500	1986 Mar	BYTE		Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1986.25	\$299,500	1986 Apr	BYTE		Jade	2048	599		2MB J-RAM-2 A&T \$599	256	2.95
1986.33	\$189,500	1986 May	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1986.42	\$189,500	1986 Jun	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1986.5	\$189,500	1986 Jul	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1986.58	\$189,500	1986 Aug	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1986.67	\$189,500	1986 Sep	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1986.75	\$189,500	1986 Oct	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1986.92	\$189,500	1986 Dec	BYTE		JDR	3072	568.5		JDR AT Multifuntion \$199.95+49.95+318.60	256	2.95
1987	\$176,167	1987 Jan	BYTE	477	JDR	3072	528.5		JDR AT Multifuntion \$139.95+49.95+3*36*2.95	256	2.95
1987.08	\$176,167	1987 Feb	BYTE		JDR	3072	528.5		JDR AT Multifuntion \$139.95+49.95+3*36*2.95	256	2.95

1987.17	\$157,000	1987 Mar	BYTE	383	Pine	3072	471	Pine 3MB Multifunction	\$147+108*3	256	2.95
1987.25	\$153,675	1987 Apr	BYTE		JDR	4096	614.7	JDR MCT-ATRAM 4MB	\$149.95+39.95+4*36*2.95	256	2.95
1987.33	\$153,675	1987 May	BYTE		JDR	4096	614.7	JDR MCT-ATRAM 4MB	\$149.95+39.95+4*36*2.95	256	2.95
1987.42	\$153,675	1987 Jun	BYTE		JDR	4096	614.7	JDR MCT-ATRAM 4MB	\$149.95+39.95+4*36*2.95	256	2.95
1987.5	\$153,675	1987 Jul	BYTE		JDR	4096	614.7	JDR MCT-ATRAM 4MB	\$149.95+39.95+4*36*2.95	256	2.95
1987.58	\$153,675	1987 Aug	BYTE		JDR	4096	614.7	JDR MCT-ATRAM 4MB	\$149.95+39.95+4*36*2.95	256	2.95
1987.67	\$162,823	1987 Sep	BYTE		JDR	3072	488.47	JDR MCT-ATMF 3MB Multifunction		256	2.95
1987.75	\$133,000	1987 Oct	BYTE	322	Advanced Com	3072	399	AST Advantage AT w/3MB		256	2.95
1987.83	\$162,823	1987 Nov	BYTE		JDR	3072	488.47	JDR MCT-ATMF 3MB Multifunction		256	2.95
1987.92	\$162,823	1987 Dec	BYTE		JDR	3072	488.47	JDR MCT-ATMF 3MB Multifunction		256	2.95
1988	\$162,823	1988 Jan	BYTE		JDR	3072	488.47	JDR MCT-ATMF 3MB Multifunction		256	2.95
1988.08	\$182,273	1988 Feb	BYTE		JDR	3072	546.82	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*3.49	256	3.49
1988.17	\$198,833	1988 Mar	BYTE		JDR	3072	596.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+426.60	256	3.95
1988.33	\$198,833	1988 May	BYTE		JDR	3072	596.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+426.60	256	3.95
1988.42	\$198,833	1988 Jun	BYTE		JDR	3072	596.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+426.60	256	3.95
1988.5	\$504,833	1988 Jul	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1988.58	\$504,833	1988 Aug	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1988.67	\$504,833	1988 Sep	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1988.75	\$504,833	1988 Oct	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1988.83	\$504,833	1988 Nov	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1988.92	\$504,833	1988 Dec	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1989	\$504,833	1989 Jan	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1989.08	\$504,833	1989 Feb	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1989.17	\$504,833	1989 Mar	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1989.25	\$504,833	1989 Apr	BYTE		JDR	3072	1514.5	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*12.45	256	12.45
1989.42	\$344,273	1989 Jun	BYTE		JDR	3072	1032.82	JDR MCT-ATMF 3MB Multifunc	\$169.90+3*36*7.99	1024	24.95
1989.5	\$197,250	1989 Jul	BYTE	316	Unitex	4096	789	Unitex RAMII-EMS - 4MB	\$249+36*15.00	1024	19.95
1989.58	\$188,250	1989 Aug	BYTE	302	Unitex	4096	753	Everex RAM II 4M-EMS	\$249+36*14.	1024	19.95
1989.67	\$188,250	1989 Sep	BYTE		Unitex	4096	753	Everex RAM II 4M-EMS	\$249+36*14.	1024	13.95
1989.75	\$127,875	1989 Oct	BYTE	340	Unitex	8192	1023	Bocaram AT 8MB -	\$159+72*12	1024	13.95
1989.83	\$116,900	1989 Nov	BYTE		Unitex	10240	1169	Everex RAM 10,000 10MB	\$179+90*11.	1024	13.95
1989.92	\$113,125	1989 Dec	BYTE		Unitex	8192	905	Bocaram AT 8MB -	\$149+72*10.50	1024	11.95
1990	\$106,375	1990 Jan	BYTE		Unitex	8192	851	Bocaram AT 8MB -	\$149+72*9.75	1024	11.95
1990.17	\$98,250	1990 Mar	BYTE		Unitex	8192	786	Bocaram AT 8MB -	\$149+72*8.50	1024	11.95
1990.33	\$98,250	1990 May	BYTE		Unitex	8192	786	Bocaram AT 8MB -	\$149+72*8.50	1024	11.95
1990.42	\$89,500	1990 Jun	BYTE		Unitex	8192	716	Bocaram AT 8MB -	\$140+72*8.00	1024	11.95
1990.5	\$82,750	1990 Jul	BYTE		Unitex	8192	662	Bocaram AT 8MB -	\$140+72*7.25	1024	11.95
1990.58	\$81,125	1990 Aug	BYTE		Nevada	8192	649	Bocaram AT Plus 8MB -	\$649	1024	11.95
1990.67	\$71,500	1990 Sep	BYTE	488		8192	572	Bocaram AT Plus 8MB -	\$140+72*6.00	1024	11.95
1990.75	\$59,000	1990 Oct	BYTE	343	IC Express	1024	59	80 1Mx9-80 SIMM @	\$59	1024	11.95
1990.83	\$51,000	1990 Nov	BYTE	453	IC Express	1024	51	80 1Mx9-80 SIMM @	\$51	1024	11.95
1990.92	\$45,500	1990 Dec	BYTE	388	IC Express	1024	45.5	80 1Mx9-80 SIMM @	\$45.50	1024	7.95
1991	\$44,500	1991 Jan	BYTE	393	IC Express	1024	44.5	80 1Mx9-80 SIMM @	\$44.50	1024	7.95
1991.08	\$44,500	1991 Feb	BYTE	335	IC Express	1024	44.5	80 1Mx9-80 SIMM @	\$44.50	1024	7.95
1991.17	\$45,000	1991 Mar	BYTE	374	AMT Internat	1024	45	100 1Mx9-100 SIMM @	\$45	1024	7.95
1991.25	\$45,000	1991 Apr	BYTE	373	AMT Internat	1024	45	100 1Mx9-100 SIMM @	\$45	1024	7.95
1991.33	\$45,000	1991 May	BYTE	356	AMT Internat	1024	45	100 1Mx9-100 SIMM @	\$45	1024	7.95
1991.42	\$43,750	1991 Jun	BYTE	398	IC Express	4096	175	80 4Mx9-80 SIMM @	\$175	1024	6.89
1991.5	\$43,750	1991 Jul	BYTE	333	IC Express	4096	175	80 4Mx9-80 SIMM @	\$175	1024	6.89
1991.58	\$41,250	1991 Aug	BYTE	321	IC Express	4096	165	80 4Mx9-80 SIMM @	\$165	1024	6.89
1991.67	\$46,250	1991 Sep	BYTE	375	Microprocess	4096	185	80 4Mx9-80 SIMM @	\$185	1024	6.95
1991.75	\$45,000	1991 Oct	BYTE	306	Microprocess	4096	180	80 4Mx9-80 SIMM @	\$180	1024	6.95
1991.83	\$39,750	1991 Nov	BYTE	401	Nevada	4096	159	80 4Mx9-80 SIMM @	\$159	1024	5.49
1991.92	\$39,750	1991 Dec	BYTE	316	Nevada	4096	159	80 4Mx9-80 SIMM @	\$159	1024	5.49
1992	\$36,250	1992 Jan	BYTE	380	AMT Internat	4096	145	80 4Mx9-80 SIMM @	\$145	1024	5.49
1992.08	\$36,250	1992 Feb	BYTE	316	AMT Internat	4096	145	80 4Mx9-80 SIMM @	\$145	1024	5.49
1992.17	\$36,250	1992 Mar	BYTE	332	AMT Internat	4096	145	80 4Mx9-80 SIMM @	\$145	36864	179.95
1992.25	\$34,750	1992 Apr	BYTE	318	Gii Micros	4096	139	4Mx9-?? SIMM @	\$139	36864	179.95
1992.33	\$30,000	1992 May	BYTE	342	AMT Internat	4096	120	80 4Mx9-80 SIMM @	\$120	36864	179.95
1992.42	\$32,500	1992 Jun	BYTE	406	AmRam	4096	130	80 4Mx9-80 SIMM @	\$130	36864	179.95
1992.5	\$33,500	1992 Jul	BYTE	351	AmRam	4096	134	80 4Mx9-80 SIMM @	\$134	36864	179.95

1992.58	\$31,000	1992 Aug	BYTE	324 Worldwide	4096	124	70	4Mx9-70 SIMM @ \$124	9216	39.95
1992.67	\$27,500	1992 Sep	BYTE	350 AMT Internat	4096	110	80	4Mx9-80 SIMM @ \$110	9216	39.95
1992.75	\$26,250	1992 Oct	BYTE	321 AMT Internat	4096	105	80	4Mx9-80 SIMM @ \$105	36864	149.95
1992.83	\$26,250	1992 Nov	BYTE	346 AMT Internat	4096	105	80	4Mx9-80 SIMM @ \$105	36864	149.95
1992.92	\$26,250	1992 Dec	BYTE	302 AMT Internat	4096	105	80	4Mx9-80 SIMM @ \$105	36864	149.95
1993	\$33,063	1993 Jan	BYTE	307 Citiitronics	16384	529		4Mx36-?? SIMM @ \$526	36864	149.95
1993.08	\$27,500	1993 Feb	BYTE	269 Memory Super	4096	110	70	4Mx9-70 SIMM @ \$110	36864	149.95
1993.17	\$27,500	1993 Mar	BYTE	239 Memory Super	4096	110	70	4Mx9-70 SIMM @ \$110	36864	149.95
1993.25	\$27,500	1993 Apr	BYTE	245 Memory Super	4096	110	70	4Mx9-70 SIMM @ \$110	36864	149.95
1993.33	\$27,500	1993 May	BYTE	263 Memory Super	4096	110	70	4Mx9-70 SIMM @ \$110	36864	149.95
1993.42	\$30,000	1993 Jun	BYTE	249 AMT Internat	1024	30	100	1Mx9-100 SIMM @ \$30	36864	149.95
1993.5	\$30,000	1993 Jul	BYTE	266 AMT Internat	1024	30	100	1Mx9-100 SIMM @ \$30	36864	149.95
1993.58	\$30,000	1993 Aug	BYTE	245 AMT Internat	1024	30	100	1Mx9-100 SIMM @ \$30	36864	149.95
1993.67	\$30,000	1993 Sep	BYTE	267 AMT Internat	1024	30	100	1Mx9-100 SIMM @ \$30	36864	149.95
1993.75	\$36,000	1993 Oct	BYTE	260 LA Trade	4096	144	80	4Mx9-80 SIMM @ \$144	36864	159.95
1993.83	\$39,750	1993 Nov	BYTE	360 First Source	4096	159	70	4Mx9-70 SIMM @ \$159	36864	159.95
1993.92	\$35,750	1993 Dec	BYTE	280 West Coast M	4096	143	70	4Mx3x3-70 SIMM @ \$143	36864	159.95
1994	\$35,750	1994 Jan	BYTE	290 West Coast M	4096	143	70	4Mx3x3-70 SIMM @ \$143	36864	159.95
1994.08	\$35,750	1994 Feb	BYTE	250 West Coast M	4096	143	70	4Mx3x3-70 SIMM @ \$143	36864	159.95
1994.17	\$36,000	1994 Mar	BYTE	251 Nevada	4096	144	80	4Mx9-80 SIMM @ \$144	36864	159.95
1994.25	\$37,250	1994 Apr	BYTE	270 La Trade	4096	149	80	4Mx9-80 SIMM @ \$149	36864	154.95
1994.33	\$37,250	1994 May	BYTE	238 La Trade	4096	149	80	4Mx9-80 SIMM @ \$149	36864	154.95
1994.42	\$37,250	1994 Jun	BYTE	320 La Trade	4096	149	80	4Mx9-80 SIMM @ \$149	36864	169.95
1994.5	\$38,500	1994 Jul	BYTE	239 Nevada	4096	154	80	4Mx9-80 SIMM @ \$154	36864	169.95
1994.58	\$37,000	1994 Aug	BYTE	226 Nevada	1024	37	100	1Mx9-100 SIMM @ \$37	36864	169.95
1994.67	\$34,000	1994 Sep	BYTE	244 Pacific Coas	4096	136	70	4Mx9-70 SIMM @ \$136	36864	169.95
1994.75	\$33,500	1994 Oct	BYTE	259 Pacific Coas	4096	134	70	4Mx9-70 SIMM @ \$134	36864	159.95
1994.83	\$32,250	1994 Nov	BYTE	324 Pacific Coas	4096	129	70	4Mx9-70 SIMM @ \$129	36864	159.95
1994.92	\$32,250	1994 Dec	BYTE	264 Pacific Coas	4096	129	70	4Mx9-70 SIMM @ \$129	36864	159.95
1995	\$32,250	1995 Jan	BYTE	256 Nevada	4096	129	80	4Mx9-80 SIMM @ \$129	36864	159.95
1995.08	\$32,000	1995 Feb	BYTE	202 First Source	4096	128	70	4Mx9-70 SIMM @ \$129	36864	159.95
1995.17	\$32,000	1995 Mar	BYTE	212 First Source	4096	128	70	4Mx9-70 SIMM @ \$129	36864	159.95
1995.25	\$31,188	1995 Apr	BYTE	254 Pacific Coas	16384	499	70	4Mx36-70 SIMM [72 pin] @ \$499	9216	37.95
1995.33	\$31,188	1995 May	BYTE	222 Pacific Coas	16384	499	70	4Mx36-70 SIMM [72 pin] @ \$499	9216	37.95
1995.42	\$31,125	1995 Jun	BYTE	286 First Source	16384	498	70	4Mx36-70 SIMM [72 pin] @ \$498	36864	135.29
1995.5	\$31,188	1995 Jul	BYTE	213 Pacific Coas	16384	499	70	4Mx36-70 SIMM [72 pin] @ \$499	147456	619
1995.58	\$30,563	1995 Aug	BYTE	190 Pacific Coas	16384	489	70	4Mx36-70 SIMM [72 pin] @ \$489	147456	619
1995.67	\$33,063	1995 Sep	BYTE	306 Future Micro	16384	529	70	4Mx36-70 SIMM [72 pin] @ \$529	147456	619
1995.75	\$33,063	1995 Oct	BYTE	214 Future Micro	16384	529	70	4Mx36-70 SIMM [72 pin] @ \$529	294912	1199
1995.83	\$30,875	1995 Nov	BYTE	286 First Source	16384	494	70	4Mx36-70 SIMM [72 pin] @ \$494	294912	1199
1995.92	\$30,875	1995 Dec	BYTE	244 First Source	16384	494	70	4Mx36-70 SIMM [72 pin] @ \$494	147456	699
1996	\$29,875	1996 Jan	BYTE	186 First Source	16384	478	70	4Mx36-70 SIMM [72 pin] @ \$478	147456	689
1996.08	\$28,750	1996 Feb	BYTE	217 Worldwide	16384	460	70	4Mx36-70 SIMM [72 pin] @ \$460	147456	689
1996.17	\$26,125	1996 Mar	BYTE	170 First Source	8192	209	70	2Mx36-70 SIMM [72 pin] @ \$209	36864	133.95
1996.25	\$24,688	1996 Apr	BYTE	196 Worldwide	16384	395	70	4Mx36-70 SIMM [72 pin] @ \$395	36864	129.95
1996.33	\$17,188	1996 May	BYTE	195 Worldwide	32768	550	60	8Mx36-60 SIMM [72 pin] @ \$550	no JDR ads anymore	
1996.42	\$14,875	1996 Jun	BYTE	186 First Source	8192	119	70	2Mx36-70 SIMM [72 pin] @ \$119	Byte appears to be	
1996.5	\$11,250	1996 Jul	BYTE	180 Worldwide	16384	180	60	4Mx32-60 SIMM [72 pin] @ \$180	going downhill in	
1996.58	\$9,063	1996 Aug	BYTE	164 Worldwide	16384	145	60	4Mx36-60 SIMM [72 pin] @ \$145	subscriptions, etc.	
1996.67	\$8,438	1996 Sep	BYTE	192 Worldwide	16384	135	60	4Mx36-60 SIMM [72 pin] @ \$135		
1996.75	\$8,000	1996 Oct	BYTE	181 First Source	16384	128	70	4Mx36-70 SIMM [72 pin] @ \$128		
1996.83	\$5,250	1996 Nov	BYTE	210 First Source	8192	42	70	2Mx32-70 SIMM [72 pin] @ \$42		
1996.92	\$5,250	1996 Dec	BYTE	177 First Source	8192	42	70	2Mx32-70 SIMM [72 pin] @ \$42		
1997	\$4,625	1997 Jan	BYTE	153 First Source	8192	37	60	2Mx32-60 SIMM EDO [72 pin] @ \$37		
1997.08	\$3,625	1997 Feb	BYTE	169 Memory On-Li	8192	29	60	2Mx32-60 SIMM EDO [72 pin] @ \$29		
1997.17	\$3,000	1997 Mar	BYTE	167 Memory On-Li	8192	24	60	2Mx32-60 SIMM EDO [72 pin] @ \$24		
1997.25	\$3,000	1997 Apr	BYTE	166 Memory On-Li	8192	24	60	2Mx32-60 SIMM EDO [72 pin] @ \$24		
1997.33	\$3,000	1997 May	BYTE	147 Memory On-Li	8192	24	60	2Mx32-60 SIMM EDO [72 pin] @ \$24		
1997.42	\$3,688	1997 Jun	BYTE	163 Memory On-Li	16384	59	60	4Mx32-60 SIMM EDO [72 pin] @ \$59		
1997.5	\$4,000	1997 Jul	Pcmag	401 Miami Int'l	8192	32	70	2Mx32-? SIMM EDO [72 pin] @ \$32	last Byte	
1997.58	\$4,125	1997 Aug	Pcmag	416 Bason Memory	8192	33	70	2Mx32-? SIMM FPM [72 pin] @ \$33		

1997.67	\$3,625	1997	Sep23	Pcmag	306	Miami Int'l	16384	58	???		
1997.75	\$3,406	1997	Oct21	Pcmag	339	Miami Int'l	32768	109	???		
1997.83	\$3,250	1997	Nov18	Pcmag	315	LA Trade	32768	104	8Mx32-? SIMM EDO [72 pin] @ \$104		
1997.92	\$2,156	1997	Dec16	Pcmag	329	Computer Ame	32768	69	8Mx32-? SIMM EDO [72 pin] @ \$69		
1998	\$2,156	1998	Jan20	Pcmag	277	Computer Ame	32768	69	8Mx32-? SIMM EDO [72 pin] @ \$69		
1998.08	\$906	1998	Feb24	Pcmag	261	Computer Ame	32768	29	8Mx32-? SIMM EDO [72 pin] @ \$29		
1998.17	\$969	1998	Mar10	Pcmag	302	Computer Ame	32768	31	8Mx32-? SIMM EDO [72 pin] @ \$31		
1998.25	\$1,219	1998	Apr21	Pcmag	258	Computer Ame	32768	39	8Mx32-? SIMM EDO [72 pin] @ \$39		
1998.33	\$1,188	1998	May26	Pcmag	294	Computer Ame	32768	38	8Mx32-? SIMM EDO [72 pin] @ \$38		
1998.42	\$969	1998	Jun30	Pcmag	296	Computer Ame	32768	31	8Mx32-? SIMM EDO [72 pin] @ \$31		
1998.58	\$1,031	1998	Aug	Pcmag	388	Computer Ser	32768	33	4Mx64-? DIMM SDRAM @ \$33		
1998.67	\$969	1998	Sep22	Pcmag	279	Computer Ser	32768	31	8Mx32-? SIMM EDO [72 pin] @ \$31		
1998.75	\$1,156	1998	Oct20	Pcmag	293	Computer Ser	32768	37	8Mx32-? SIMM EDO [72 pin] @ \$37		
1998.83	\$844	1998	Nov17	Pcmag	286	Discount Mem	32768	27	8Mx32-? SIMM FPM [72 pin] @ \$27		
1998.92	\$844	1998	Dec1	Pcmag	390	Discount Mem	32768	27	8Mx32-? SIMM FPM [72 pin] @ \$27		
1999.08	\$1,438	1999	Feb9	Pcmag	263	Memory Liqui	32768	46	8Mx32-? SIMM FPM [72 pin] @ \$46		
1999.13	\$844	1999	Feb23	Pcmag	226	Discount Mem	32768	27	8Mx32-? SIMM FPM [72 pin] @ \$27		
1999.17	\$1,250	1999	Mar23	Pcmag	261	Tiger System	65536	79.99	64 MB DIMM PC-100 @ \$79.99		
1999.25	\$1,250	1999	Apr20	Pcmag	277	<a href="#">TigerDirect.</a>	65536	79.99	64 MB DIMM PC-100 @ \$79.99		
1999.33	\$859	1999	May25	Pcmag	273	<a href="#">TigerDirect.</a>	65536	54.99	64 MB DIMM PC-100 @ \$54.99		
1999.5	\$781	1999	Jul99	Pcmag	323	<a href="#">TigerDirect.</a>	131072	99.99	128 MB DIMM PC-100 @ \$99.99		
1999.67	\$868	1999	Sep21	Pcmag	222	<a href="#">www.crucial.</a>	131072	111.14	128 MB DIMM PC-100 @ \$111.14		
1999.75	\$1,039	1999	Oct19	Pcmag	219	<a href="#">www.crucial.</a>	65536	66.49	64 MB DIMM PC-100 @ \$66.49		
1999.83	\$1,336	1999	Nov16	Pcmag	247	<a href="#">www.crucial.</a>	131072	170.99	128 MB DIMM PC-100 @ \$170.99		
1999.92	\$2,348	1999	Dec1	Pcmag	287	<a href="#">www.crucial.</a>	131072	300.59	128 MB DIMM PC-100 @ \$300.59		
2000	\$1,561	2000	Jan18	Pcmag	14	Crucial Tech	65536	99.89	64 MB DIMM PC-100 @ \$99.89		
2000.08	\$1,476	2000	Feb18	Pcmag	18	Crucial Tech	65536	94.49	64 MB DIMM PC-100 @ \$94.49		
2000.17	\$1,078	2000	Mar21	Pcmag	214	<a href="#">StarSurplus.</a>	65536	69	64 MB DIMM PC-100 @ \$69		
2000.25	\$844	2000	Apr18	Pcmag	16	Crucial Tech	65536	53.99	64 MB DIMM PC-100 @ \$53.99		
2000.33	\$695	2000	May9	Pcmag	254	<a href="#">StarSurplus.</a>	131072	89	128 MB DIMM PC-100 @ \$89		
2000.42	\$900	2000	Jun27	Pcmag	18	Crucial Tech	65536	57.59	64 MB DIMM PC-100 @ \$57.59		
2000.5	\$773	2000	Jul	Pcmag	228	<a href="#">StarSurplus.</a>	131072	99	128 MB DIMM PC-133 @ \$99		
2000.58	\$844	2000	Aug	Pcmag	18	Crucial Tech	65536	53.99	64 MB DIMM PC-100 @ \$53.99		
2000.67	\$1,069	2000	Sep1	Pcmag	18	Crucial Tech	65536	68.39	64 MB DIMM PC-133 @ \$68.39	only advert for RAM	
2000.75	\$1,125	2000	Oct3	Pcmag	18	Crucial Tech	65536	71.99	64 MB DIMM PC-133 @ \$71.99	only advert for RAM	
2000.83	\$1,125	2000	Nov7	Pcmag	18	Crucial Tech	65536	71.99	64 MB DIMM PC-133 @ \$71.99	only advert for RAM	
2000.92	\$900	2000	Dec5	Pcmag	19	Crucial Tech	65536	57.59	64 MB DIMM PC-133 @ \$57.59	discount for web purchase	
2001	\$745	2001	Jan2	Pcmag	19	Crucial Tech	65536	47.69	64 MB DIMM PC-133 @ \$47.69	discount for web purchase	
2001.08	\$464	2001	Feb6	Pcmag	90	Crucial Tech	131072	59.39	128 MB DIMM PC-133 @ \$59.39	discount for web purchase	
2001.17	\$464	2001	Mar6	Pcmag	99	Crucial Tech	131072	59.39	128 MB DIMM PC-133 @ \$59.39	discount for web purchase	
2001.25	\$383	2001	Apr3	Pcmag	178	<a href="#">StarSurplus.</a>	131072	49	128 MB DIMM PC-133 @ \$49		
2001.33	\$387	2001	May8	Pcmag	85	Crucial Tech	131072	49.49	128 MB DIMM PC-100 @ \$49.49	discount for web purchase	
2001.42	\$305	2001	Jun12	Pcmag	207	<a href="#">StarSurplus.</a>	131072	39	128 MB DIMM PC-133 @ \$39		
2001.5	\$352	2001	Jul	Pcmag	143	Crucial Tech	262144	89.99	256 MB DDR PC2100 @ \$89.99	discount for web purchase	
2001.5	\$270	2001	Jul	Pcmag	196	<a href="#">iMemoryMall.</a>	262144	69	256 MB DIMM PC-133 @ \$69		
2001.58	\$191	2001	Aug	Pcmag	169	<a href="#">StarSurplus.</a>	262144	49	256 MB DIMM PC-133 @ \$49		
2001.67	\$191	2001	Sep4	Pcmag	215	<a href="#">StarSurplus.</a>	262144	49	256 MB DIMM PC-133 @ \$49		
2001.75	\$169	2001	Oct16	Pcmag	60	Crucial Tech	131072	21.59	128 MB DIMM PC-133 @ \$21.59	discount for web purchase	
2001.77	\$148	2001	Oct30	Pcmag	161	Crucial Tech	131072	18.89	128 MB DIMM PC-133 @ \$18.89	discount for web purchase	
2002.08	\$134	2002	Feb12	Pcmag	47	Crucial Tech	262144	34.19	256 MB DIMM PC-133 @ \$34.19		
2002.08	\$207	2002	Feb12	Pcmag	47	Crucial Tech	262144	53.09	256 MB DDR PC2100 @ \$53.09		
2002.25	\$193	2002	Apr9	Pcmag	133	<a href="#">StarSurplus.</a>	524288	99	512 MB DIMM PC-133 @ \$99		
2002.33	\$193	2002	May7	Pcmag	132	<a href="#">StarSurplus.</a>	524288	99	512 MB DIMM PC-133 @ \$99		
2002.42	\$330	2002	Jun30	Pcmag	68	Crucial Tech	131072	42.29	128 MB DIMM PC-133 @ \$42.29		
2002.58	\$193	2002	Aug02	Pcmag	49	Crucial Tech	262144	49.49	256 MB DIMM PC-133 @ \$49.49		
2002.75	\$193	2002	Oct1	Pcmag	115	Crucial Tech	262144	49.49	256 MB DIMM PC-133 @ \$49.49		
2003.17	\$176	2003	Mar25	Pcmag	95	<a href="#">NewEgg.com</a>	262144	45	256 MB DIMM DDR-2100 @ \$45		
2003.25	\$76	2003	Apr22	Pcmag	133	<a href="#">StarSurplus.</a>	524288	39	512 MB DIMM PC-133 @ \$39		
2003.33	\$126	2003	May27	Pcmag	95	<a href="#">NewEgg.com</a>	524288	64.5	512 MB DIMM DDR-2700 @ \$64.50		
2003.42	\$115	2003	Jun17	Pcmag	137	<a href="#">HardDrive.co</a>	524288	59	512 MB DIMM PC-133 @ \$59		
2003.5	\$133	2003	July	Pcmag	101	Crucial Tech	262144	33.99	256 MB DIMM DDR-2100 @ \$33.99		

2003.58	\$129	2003	Aug19	Pcmag	54	Crucial Tech	524288	65.99	512 MB DIMM SDRAM @ \$65.99	DDR at \$72.99
2003.67	\$143	2003	Sep16	Pcmag	64	Crucial Tech	524288	72.99	512 MB DIMM SDRAM @ \$72.99	DDR at \$86.99
2003.75	\$148	2003	Oct1	Pcmag	54	Crucial Tech	524288	75.99	512 MB DIMM SDRAM @ \$75.99	DDR at \$86.99
2003.83	\$160	2003	Nov25	Pcmag	82	Crucial Tech	524288	81.99	512 MB DIMM PC-133 @ \$81.99	DDR at \$85.99
2003.99	\$166	2003	Dec30	Pcmag	37	Crucial Tech	524288	84.99	512 MB DIMM PC-133 @ \$84.99	DDR at \$85.99
2004	\$174	2004	Jan	Pcmag	143	NewEgg.com	524288	89	512 MB DIMM DDR-3200 @ \$89	
2004.08	\$148	2004	Feb17	Pcmag	78	NewEgg.com	524288	76	512 MB DIMM DDR-3200 @ \$76	GEIL
2004.17	\$146	2004	Mar16	Pcmag	115	NewEgg.com	524288	75	512 MB DIMM DDR-3200 @ \$75	GEIL
2004.33	\$156	2004	May4	Pcmag	19	NewEgg.com	524288	80	512 MB DIMM DDR-3200 @ \$76	GEIL
2004.42	\$203	2004	Jun8	Pcmag	19	NewEgg.com	524288	104	512 MB DIMM DDR-3200 @ \$104	GEIL
2004.5	\$176	2004	July	Pcmag	19	NewEgg.com	524288	90	512 MB DIMM DDR-3200 @ \$90	Kingston
2005.25	\$185	2005	Apr12	Pcmag	24	NewEgg.com	1048576	189	2x512 MB DIMM DDR-3200 @ \$90	Mushkin
2005.42	\$149	2005	Jun7	Pcmag	20	NewEgg.com	1048576	153	1 GB DIMM DDR PC-3200Pro @ \$153	Corsair
2005.83	\$116	2005	Nov8	Pcmag	67	NewEgg.com	1048576	119	1 GB DIMM DDR2-533 @ \$119	
2005.92	\$185	2005	Dec6	Pcmag	139	NewEgg.com	1048576	189	2x512 MB DIMM DDR-4800 @ \$189	
2006.17	\$112	2006	Mar21	Pcmag	66	NewEgg.com	2097152	229.81	2x1 GB DIMM DDR-500 PC4000 @ \$229.81	OCZ Gold
2006.33	\$73	2006	May25	Web		NewEgg.com	2097152	148.99	2x1 GB DIMM DDR2-667 @ \$148.99 free shipping	OCZ Gold
2006.5	\$82	2006	Jul23	Web		NewEgg.com	1048576	83.99	1GB DIMM DDR2-667 @\$83.99	Kingston
2006.67	\$73	2006	Sep1	Web		NewEgg.com	2097152	149.99	2x1 GB DIMM DDR2-667 @ \$179.99-\$30 rebate + 4.99	OCZ Gold
2006.75	\$88	2006	Oct5	Web		NewEgg.com	2097152	179.98	2x1 GB DIMM DDR2-667 @ \$214.99-\$40 rebate + 4.99	PQI
2006.83	\$98	2006	Nov25	Web		NewEgg.com	2097152	199.99	2x1 GB DIMM DDR2-800 @ \$199.99 + free shipping	G. Skill
2006.99	\$92	2006	Dec21	Web		NewEgg.com	1048576	93.98	1GB DIMM DDR-400 @\$88.99 + 4.99 shipping	Wintec
2007	\$82	2007	Jan28	Web		NewEgg.com	1048576	83.98	1GB DIMM DDR-400 @\$78.99 + 4.99 shipping	PQI
2007.08	\$78	2007	Feb28	Web		NewEgg.com	1048576	79.98	1GB DIMM DDR2-800 @ \$74.99 + \$4.99 shipping	Patriot
2007.17	\$66	2007	Mar15	Web		NewEgg.com	2097152	134.98	2x1 GB DIMM DDR2-667 @ \$129.99 + 4.99 shipping	Wintec
2007.33	\$46	2007	May7	Web		NewEgg.com	2097152	94.99 5-5-5-18	2x1 GB DIMM DDR2-800 @ \$94.99 + free shipping	A-Data
2007.5	\$39	2007	July9	Web		NewEgg.com	2097152	78.98 cas 5	2x1 GB DIMM DDR2-667 @ \$73.99 + 4.99 shipping	Super Talent
2007.67	\$35	2007	Sept30	Web		NewEgg.com	2097152	71.98 cas 5	2x1 GB DIMM DDR2-800 @ \$66.99 + 4.99 shipping	Mushkin
2007.75	\$32	2007	Oct16	Web		NewEgg.com	2097152	65.98 5-5-5-18	2x1 GB DIMM DDR2-800 @ \$60.99 + 4.99 shipping	A-Data
2007.83	\$24	2007	Nov10	Web		NewEgg.com	2097152	49.98	2x1 GB DIMM DDR2-667 @ \$44.99 + 4.99 shipping	Kingston
2007.92	\$24	2007	Dec05	Web		NewEgg.com	2097152	49.95 5-5-5-15	2x1 GB DIMM DDR2-800 @ \$49.95 + free shipping	G.Skill
2008	\$23	2008	Jan18	Web		NewEgg.com	4194304	94.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$94.99 + free shipping	G.Skill
2008.08	\$22	2008	Feb20	Web		NewEgg.com	2097152	44.99 5-5-5-15	2x1 GB DIMM DDR2-800 @ \$44.99 + free shipping	G.Skill
2008.33	\$22	2008	May18	Web		NewEgg.com	2097152	44.99 5-5-5-15	2x1 GB DIMM DDR2-800 @ \$44.99 + free shipping	G.Skill
2008.5	\$21	2008	Jul07	Web		NewEgg.com	4194304	84.98 5-5-5-18	2x2 GB DIMM DDR2-800 @ \$77.99 + 5.99 shipping	A-Data
2008.58	\$18	2008	Aug21	Web		NewEgg.com	2097152	35.99	2x1 GB DIMM DDR2-667 @ \$35.99 + free shipping	Crucial
2008.67	\$15	2008	Sep25	Web		NewEgg.com	2097152	29.99 cas 5	2x1 GB DIMM DDR2-667 @ \$29.99 + free shipping	Crucial
2008.83	\$11	2008	Nov14	Web		NewEgg.com	4194304	44.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$49.99 + free shipping	G.Skill
2008.92	\$10	2008	Dec14	Web		NewEgg.com	4194304	39.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$39.99 + free shipping	G.Skill
2009	\$10	2009	Jan19	Web		NewEgg.com	4194304	39.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$39.99 + free shipping	G.Skill
2009.08	\$11	2009	Feb14	Web		NewEgg.com	2097152	21.99 cas 6	2x1 GB DIMM DDR2-800 @ \$21.99 + free shipping	Kingston
2009.25	\$10	2009	Apr03	Web		NewEgg.com	4194304	42.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$42.99 + free shipping	G.Skill
2009.42	\$11	2009	Jun03	Web		NewEgg.com	4194304	46.99 5-5-5-18	2x2 GB DIMM DDR2-800 @ \$46.99 + free shipping	Corsair
2009.5	\$11	2009	Jul02	Web		NewEgg.com	4194304	44.99 5-5-5-18	2x2 GB DIMM DDR2-800 @ \$44.99 + free shipping	Corsair
2009.58	\$13	2009	Aug20	Web		NewEgg.com	4194304	51.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$51.99 + free shipping	G.Skill
2009.75	\$18	2009	Oct07	Web		NewEgg.com	4194304	74.99 5-5-5-15	2x2 GB DIMM DDR2-1066 @ \$74.99 + free shipping	Patriot
2009.92	\$21	2009	Dec12	Web		NewEgg.com	2097152	41.99	1x2 GB DIMM DDR2-800 @ \$41.99 + free shipping	Crucial
2010	\$19	2010	Jan15	Web		NewEgg.com	4194304	77.99 5-5-5-15	2x2 GB DIMM DDR2-800 @ \$77.99 + free shipping	Wintec
2010.08	\$20	2010	Feb11	Web		NewEgg.com	4194304	82.78 cas 5	2x2 GB DIMM DDR2-667 @ \$79.99 + 2.99 shipping	Patriot
2010.17	\$20	2010	Mar10	Web		NewEgg.com	2097152	39.99 cas 5	2x1 GB DIMM DDR2-800 @ \$39.99 + free shipping	Wintec
2010.33	\$24	2010	May09	Web		NewEgg.com	4194304	98.98 cas 5	2x2 GB DIMM DDR2-800 @ \$92.99 + 5.99 shipping	PQI
2010.5	\$21	2010	Jul25	Web		NewEgg.com	4194304	85.98 9-9-9-20	2x2 GB DIMM DDR3-1333 @ \$84.99 + 0.99 shipping	
2010.58	\$22	2010	Aug26	Web		NewEgg.com	4194304	89.99 9-9-9-24	2x2 GB DIMM DDR3-1333 @ \$89.99 + free shipping	Patriot
2010.75	\$17	2010	Oct07	Web		NewEgg.com	4194304	69.99 7-7-7-20	2x2 GB DIMM DDR3-1066 @ \$69.99 + free shipping	OCZ Gold
2010.83	\$15	2010	Nov16	Web		NewEgg.com	4194304	59.99 9-9-9-24	2x2 GB DIMM DDR3-1333 @ \$59.99 + free shipping	Mushkin
2010.92	\$12	2010	Dec10	Web		NewEgg.com	8388608	99.99 9-9-9-24	2x4 GB DIMM DDR3-1333 @ \$99.99 + free shipping	Mushkin
2011	\$10	2011	Jan21	Web		NewEgg.com	4194304	40.98 cas 9	2x2 GB DIMM DDR3-1333 @ \$40.98 + free shipping	A-Data
2011.08	\$10	2011	Feb12	Web		NewEgg.com	4194304	41.99 cas 9	1x4 GB DIMM DDR3-1333 @ \$41.99 + free shipping	Kingston
2011.33	\$10	2011	May06	Web		NewEgg.com	8388608	81.99 9-9-9-24	2x4 GB DIMM DDR3-1333 @ \$81.99 + free shipping	GEIL
2011.42	\$9	2011	Jun22	Web		NewEgg.com	8388608	69.99 cas 9	2x4 GB DIMM DDR3-1333 @ \$69.99 + free shipping	Kingston
2011.67	\$5	2011	Sep02	Web		NewEgg.com	4194304	21.99 cas 9	1x4 GB DIMM DDR3-1333 @ \$21.99 + free shipping	Crucial



2011.75	\$5	2011	Oct17	Web	<a href="#">NewEgg.com</a>	8388608	41.99	cas 9	2x4 GB DIMM DDR3-1333 @ \$41.99 + free shipping	PNY Optima	
2012	\$5	2012	Jan12	Web	<a href="#">NewEgg.com</a>	8388608	39.99	9-9-9-24	2x4 GB DIMM DDR3-1600 @ \$39.99 + free shipping	Corsair	
2012.08	\$5	2012	Feb13	Web	<a href="#">NewEgg.com</a>	8388608	39.99	cas 9	2x4 GB DIMM DDR3-1600 @ \$39.99 + free shipping	Kingston	
2012.25	\$5	2012	Apr08	Web	<a href="#">NewEgg.com</a>	8388608	40.99	9-9-9-24	2x4 GB DIMM DDR3-1333 @ \$40.99 + free shipping	Patriot	
2012.33	\$5	2012	May24	Web	<a href="#">NewEgg.com</a>	8388608	39.99	9-9-9-24	2x4 GB DIMM DDR3-1333 @ \$39.99 + free shipping	Team Elite	
2012.58	\$5	2012	Aug20	Web	<a href="#">NewEgg.com</a>	1.70E+07	77.99	cas 9	2x8 GB DIMM DDR3-1333 @ \$77.99 + free shipping	Kingston	
2012.67	\$4	2012	Sep21	Web	<a href="#">NewEgg.com</a>	1.70E+07	64.79	10-10-10-28	2x8 GB DIMM DDR3-1600 @ \$64.79 + free shipping	GEIL EVO Corsa	
2012.83	\$4	2012	Nov17	Web	<a href="#">NewEgg.com</a>	8388608	29.99	cas 9	2x4 GB DIMM DDR3-1333 @ \$29.99 + free shipping	Crucial Ballistix	
2013	\$4	2013	Jan17	Web	<a href="#">NewEgg.com</a>	8388608	34.99	9-9-9-24	2x4 GB DIMM DDR3-1600 @ \$34.99 + free shipping	Wintec One	
2013.08	\$5	2013	Feb23	Web	<a href="#">NewEgg.com</a>	1.70E+07	88.99	9-9-9-28	2x8 GB DIMM DDR3-1600 @ \$88.99 + free shipping	GEIL EVO Corsa	
2013.33	\$7	2013	May18	Web	<a href="#">NewEgg.com</a>	1.70E+07	109.99	9-10-9-28	2x8 GB DIMM DDR3-1866 @ \$109.99 + free shipping	GEIL	
2013.42	\$6	2013	Jun30	Web	<a href="#">NewEgg.com</a>	8388608	49.99	cas 9	2x4 GB DIMM DDR3-1333 @ \$49.99 + free shipping		
2013.58	\$7	2013	Aug09	Web	<a href="#">NewEgg.com</a>	8388608	59.99	9-9-2009	2x4 GB DIMM DDR3-1333 @ \$59.99 + free shipping	WINTEC value	
2013.67	\$6	2013	Sep07	Web	<a href="#">NewEgg.com</a>	8388608	52.99	cas 10	1x8 GB DIMM DDR3-1600 @ \$52.99 + free shipping	Crucial	
2013.75	\$8	2013	Oct16	Web	<a href="#">NewEgg.com</a>	1.70E+07	133.99	10-11-10-30	2x8 GB DIMM DDR3-1866 @ \$133.99 + free shipping	Patriot Intel ExMLE	
2013.83	\$9	2013	Nov10	Web	<a href="#">NewEgg.com</a>	8388608	69.99	cas 9	1x8 GB DIMM DDR3-1600 @ \$69.99 + free shipping	Crucial Ballistix Sport	
2013.92	\$8	2013	Dec23	Web	<a href="#">NewEgg.com</a>	1.70E+07	129.99	cas 11	2x8 GB DIMM DDR3-1600 @ \$129.99 + free shipping	Silicon Power	
2014.08	\$10	2014	Feb08	Web	<a href="#">NewEgg.com</a>	4194304	38.99	cas 10	1x4 GB DIMM DDR3-1600 @ \$38.99 + free shipping	Patriot Viper 3	
2014.17	\$8	2014	Mar13	Web	<a href="#">NewEgg.com</a>	8388608	64.99	cas 9	2x4 GB DIMM DDR3-1600 @ \$64.99 + free shipping	HyperX XMP	
2014.25	\$7	2014	Apr10	Web	<a href="#">NewEgg.com</a>	4194304	29.99	11-11-11-28	1x4 GB DIMM DDR3-1600 @ \$29.99 + free shipping	Team	
2014.42	\$8	2014	Jun19	Web	<a href="#">NewEgg.com</a>	8388608	64.99	9-9-9-24	2x4 GB DIMM DDR3-1333 @ \$64.99 + free shipping	Team Elite	
2014.58	\$9	2014	Aug02	Web	<a href="#">NewEgg.com</a>	8388608	69.99	9-9-9-24	2x4 GB DIMM DDR3-1600 @ \$69.99 + free shipping	Team Vulcan	
2014.67	\$9	2014	Sep13	Web	<a href="#">NewEgg.com</a>	8388608	69.99	9-9-9-24	2x4 GB DIMM DDR3-1600 @ \$69.99 + free shipping	Team Vulcan	
2014.83	\$9	2014	Nov11	Web	<a href="#">NewEgg.com</a>	4194304	34.99	11-11-11-30	1x4 GB DIMM DDR3-1600 @ \$34.99 + free shipping	Pareema	
2015	\$8	2015	Jan22	Web	<a href="#">NewEgg.com</a>	8388608	63.99	cas 10	1x8 GB DIMM DDR3-1866 @ \$63.99 + free shipping	Hypexx Fury	
2015.08	\$7	2015	Feb15	Web	<a href="#">NewEgg.com</a>	8388608	59.99	cas 11	2x4 GB DIMM DDR3-1600 @ \$59.99 + free shipping	Crucial	
2015.25	\$6	2015	Apr11	Web	<a href="#">NewEgg.com</a>	8388608	49.99	11-11-11-28	2x4 GB DIMM DDR3-1600 @ \$49.99 + free shipping	Avexir	
2015.33	\$6	2015	May15	Web	<a href="#">NewEgg.com</a>	1.70E+07	91.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$91.99 + free shipping	Team Vulcan	
2015.5	\$5	2015	Jul10	Web	<a href="#">NewEgg.com</a>	8388608	39.99	11-11-11-28	1x8 GB DIMM DDR3-1600 @ \$39.99 + free shipping	Team Elite	
2015.58	\$5	2015	Aug23	Web	<a href="#">NewEgg.com</a>	1.70E+07	73.99	9-9-9-24	2x8 GB DIMM DDR3L-1600 @ \$73.99 + free shipping	Mushkin Enhanced ECO2	
2015.67	\$4	2015	Sep22	Web	<a href="#">NewEgg.com</a>	8388608	34.99	9-9-9-24	2x4 GB DIMM DDR3-1333 @ \$34.99 + free shipping	Team Elite	
2015.75	\$4	2015	Oct24	Web	<a href="#">NewEgg.com</a>	1.70E+07	68.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$68.99 + free shipping	Team Dark	
2015.83	\$4	2015	Nov21	Web	<a href="#">NewEgg.com</a>	1.70E+07	62.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$62.99 + free shipping	V-Color XMC	
2015.92	\$4	2015	Dec18	Web	<a href="#">NewEgg.com</a>	1.70E+07	59.99	10-10-10-27	2x8 GB DIMM DDR3-1600 @ \$59.99 + free shipping	Team Vulcan	
2016.08	\$4	2016	Feb14	Web	<a href="#">NewEgg.com</a>	1.70E+07	58.99	9-9-9-24	2x8 GB DIMM DDR3L-1600 @ \$58.99 + free shipping	Mushkin Ehanced Essentials	
2016.25	\$3	2016	Apr11	Web	<a href="#">NewEgg.com</a>	1.70E+07	49.99	9-9-9-24	2x8 GB DIMM DDR3L-1600 @ \$49.99 + free shipping	Mushkin Ehanced Essentials	
2016.33	\$3	2016	May18	Web	<a href="#">NewEgg.com</a>	1.70E+07	48.99	15-15-15-35	2x8 GB DIMM DDR4-2133 @ \$48.99 + free shipping	Team Elite Plus	
2016.42	\$3	2016	Jun20	Web	<a href="#">NewEgg.com</a>	1.70E+07	44.99	10-11-10-30	2x8 GB DIMM DDR3-1866 @ \$44.99 + free shipping	V-Color OC Series	
2016.5	\$3	2016	Jul22	Web	<a href="#">NewEgg.com</a>	1.70E+07	49.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$49.99 + free shipping	Team Vulcan	
2016.58	\$4	2016	Aug22	Web	<a href="#">NewEgg.com</a>	1.70E+07	57.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$57.99 + free shipping	Team Vulcan	
2016.75	\$4	2016	Oct15	Web	<a href="#">NewEgg.com</a>	3.40E+07	114.99	15-15-15-35	2x16 GB DIMM DDR4-2133 @ \$114.99 + free shipping	G. Skill Aegis	
2016.83	\$4	2016	Nov15	Web	<a href="#">NewEgg.com</a>	1.70E+07	67.99	15-15-15-36	2x8 GB DIMM DDR4-2133 @ \$67.99 + free shipping	GEIL EVO Potenza	
2016.92	\$5	2016	Dec21	Web	<a href="#">NewEgg.com</a>	1.70E+07	74.99	16-16-16-36	2x8 GB DIMM DDR4-3000 @ \$74.99 + free shipping	Team Dark	
2017	\$5	2017	Jan15	Web	<a href="#">NewEgg.com</a>	1.70E+07	79.99	16-18-18-38	2x8 GB DIMM DDR4-3000 @ \$79.99 + free shipping	Team Vulcan	
2017.17	\$5	2017	Mar12	Web	<a href="#">NewEgg.com</a>	1.70E+07	89.99	11-11-11-27	2x8 GB DIMM DDR3-2133 @ \$89.99 + free shipping	Ballistic Elite	
2017.33	\$6	2017	May05	Web	<a href="#">NewEgg.com</a>	3.40E+07	185.99	15-15-15-36	2x16 GB DIMM DDR4-2133 @ \$185.99 + free shipping	GEIL Forza	
2017.42	\$5	2017	Jun22	Web	<a href="#">NewEgg.com</a>	1.70E+07	89.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$89.99 + free shipping	Team Dark	
2017.5	\$6	2017	Jul22	Web	<a href="#">NewEgg.com</a>	1.70E+07	95.99	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$95.99 + free shipping	Adata XPG V1.0	
2017.67	\$6	2017	Sep19	Web	<a href="#">NewEgg.com</a>	8388608	49.99	9-9-9-24	2x4 GB DIMM DDR3-1600 @ \$49.99 + free shipping	Team Vulcan	
2017.75	\$7	2017	Oct27	Web	<a href="#">NewEgg.com</a>	1.70E+07	109.99		2x8 GB DIMM DDR3-1600 @ \$109.99 + free shipping	Team Elite Plus	
2017.92	\$7	2017	Dec12	Web	<a href="#">NewEgg.com</a>	1.70E+07	115.99		2x8 GB DIMM DDR3-1600 @ \$115.99 + free shipping	Silicon Power	
2018.08	\$7	2018	Feb14	Web	<a href="#">NewEgg.com</a>	1.70E+07	108.99		2x8 GB DIMM DDR3-1600 @ \$108.99 + free shipping	Silicon Power	
2018.17	\$7	2018	Mar23	Web	<a href="#">NewEgg.com</a>	1.70E+07	113.99		2x8 GB DIMM DDR3-1600 @ \$113.99 + free shipping	Team Dark	
2018.33	\$7	2018	May11	Web	<a href="#">NewEgg.com</a>	1.70E+07	111.98		2x8 GB DIMM DDR3-1600 @ \$110.99 + \$0.99 shipping	Team Dark	
2018.42	\$6	2018	Jun19	Web	<a href="#">NewEgg.com</a>	1.70E+07	104.99	11-11-11-28	2x8 GB DIMM DDR3-1600 @ \$104.99 + free shipping	Adata XPG V1.0	
2018.5	\$7	2018	Jul08	Web	<a href="#">NewEgg.com</a>	1.70E+07	110.98	9-9-9-24	2x8 GB DIMM DDR3-1600 @ \$109.99 + \$0.99 shipping	Team Vulcan	
2018.58	\$6	2018	Aug24	Web	<a href="#">NewEgg.com</a>	1.70E+07	100.98		2x8 GB DIMM DDR3-1600 @ \$99.99 + \$0.99 shipping	Team Dark	
2018.67	\$5	2018	Sep20	Web	<a href="#">NewEgg.com</a>	1.70E+07	89.99	11-11-11-28	2x8 GB DIMM DDR3-1600 @ \$89.99 + free shipping	G.Skill	
2018.83	\$5	2018	Nov11	Web	<a href="#">NewEgg.com</a>	1.70E+07	82.99	11-11-11-28	2x8 GB DIMM DDR3L-1600 @ \$82.99 + free shipping	Mushkin Enhanced Essentials	
2018.92	\$5	2018	Dec16	Web	<a href="#">NewEgg.com</a>	8388608	37.99		1x8 GB DIMM DDR3-1333 @ \$37.99 + free shipping	G.Skill Value Series	
2019	\$4	2019	Jan17	Web	<a href="#">NewEgg.com</a>	1.70E+07	69.99	11-11-11-28	2x8 GB DIMM DDR3L-1600 @ \$69.99 + free shipping	Mushkin Enhanced Essentials	

2019.08	\$4	2019	Feb11	Web	<a href="#">NewEgg.com</a>	1.70E+07	69.99	11-11-11-28	2x8 GB DIMM DDR3L-1600 @ \$69.99 + free shipping	Mushkin Enhanced Essentials	
2019.17	\$4	2019	Mar17	Web	<a href="#">NewEgg.com</a>	1.70E+07	68.99	11-11-11-28	2x8 GB DIMM DDR3L-1600 @ \$68.99 + free shipping	Mushkin Enhanced Essentials	
2019.25	\$4	2019	Apr21	Web	<a href="#">NewEgg.com</a>	1.70E+07	60.98	11-11-11-28	2x8 GB DIMM DDR3-1600 @ \$59.99 + \$0.99 shipping	G.Skill Value	
2019.33	\$3	2019	20-May	Web	<a href="#">NewEgg.com</a>	8388608	27.99	CL 11	1x 8GB DIMM DDR3-1600 @ \$27.99 + free shipping	Patriot Signature Line	
2019.42	\$3	2019	19-Jun	Web	<a href="#">NewEgg.com</a>	8388608	25.99	17-17-17-39	1x 8GB DIMM DDR4-2400 @ \$25.99 + free shipping	OLOy	
2019.5	\$3	2019	18-Jul	Web	<a href="#">NewEgg.com</a>	16777216	44.99	17-17-17-39	2x 8GB DIMM DDR4-2400 @ \$44.99 + free shipping	OLOy	
2019.58	\$3	2019	17-Aug	Web	<a href="#">NewEgg.com</a>	16777216	44.99	17-17-17-39	2x 8GB DIMM DDR4-2400 @ \$44.99 + free shipping	OLOy	
2019.67	\$3	2019	16-Sep	Web	<a href="#">NewEgg.com</a>	16777216	53.99	16-18-18-35	2x 8GB DIMM DDR4-2666 @ \$53.99 + free shipping	OLOy	
2019.75	\$3	2019	18-Oct	Web	<a href="#">NewEgg.com</a>	33554432	99.99	19-19-19-43	2x 16GB DIMM DDR4-2666 @ \$99.99 + free shipping	G. Skill Aegis	
2019.83	\$3	2019	14-Nov	Web	<a href="#">NewEgg.com</a>	33554432	94.99	16-18-18-36	2x 16GB DIMM DDR4-3000 @ \$94.99 + free shipping	Geil EVO Potenza	
2019.92	\$3	2019	17-Dec	Web	<a href="#">NewEgg.com</a>	33554432	92.99	16-18-18-38	2x 16GB DIMM DDR4-3000 @ \$92.99 + free shipping	OLOy	
2020	\$3	2020	20-Jan	Web	<a href="#">NewEgg.com</a>	16777216	47.99	17-17-17-39	2x 8GB DIMM DDR4-2400 @ \$47.99 + free shipping	OLOy	
2020.08	\$3.17	2020	17-Feb	Web	<a href="#">NewEgg.com</a>	33554432	99.99	17-17-17-39	2x 16GB DIMM DDR4-2400 @ \$99.99 + free shipping	OLOy	
2020.17	\$3.58	2020	23-Mar	Web	<a href="#">NewEgg.com</a>	33554432	114.99	17-17-17-39	2x 16GB DIMM DDR4-2400 @ \$114.99 + free shipping	OLOy	
2020.25	\$3.58	2020	23-Apr	Web	<a href="#">NewEgg.com</a>	16777216	57.99	16-18-18-36	1x 16GB DIMM DDR4-3000 @ \$57.99 + free shipping	OLOy	
2020.33	\$3.58	2020	23-May	Web	<a href="#">NewEgg.com</a>	33554432	114.99	19-19-19-43	2x 16GB DIMM DDR4-2666 @ \$114.99 + free shipping	G. Skill	
2020.42	\$3.28	2020	21-Jun	Web	<a href="#">NewEgg.com</a>	33554432	104.99	15-15-15-39	2x 16GB DIMM DDR4-2400 @ \$104.99 + free shipping	G. Skill X series	
2020.5	\$2.97	2020	18-Jul	Web	<a href="#">NewEgg.com</a>	33554432	94.99	19-19-19-43	2x 16GB DIMM DDR4-2666 @ \$94.99 + free shipping	G. Skill Aegis	
2020.58	\$2.76	2020	19-Aug	Web	<a href="#">NewEgg.com</a>	33554432	89.99	22-22-22-52	1x 32GB DIMM DDR4-3200 @ \$89.99 + free shipping	Team Elite	
2020.67	\$2.87	2020	20-Sep	Web	<a href="#">NewEgg.com</a>	33554432	91.99	16-18-18-36	2x 16GB DIMM DDR4-2666 @ \$91.99 + free shipping	OLOy	
2020.75	\$2.76	2020	17-Oct	Web	<a href="#">NewEgg.com</a>	33554432	89.99	16-18-18-36	2x 16GB DIMM DDR4-3000 @ \$89.99 + free shipping	GEIL Evo Potenza	
2020.83	\$2.97	2020	19-Nov	Web	<a href="#">NewEgg.com</a>	33554432	94.99	20-22-22-46	2x 16GB DIMM DDR4-3200 @ \$94.99 + free shipping	Team T-Force	
2020.92	\$3.07	2020	21-Dec	Web	<a href="#">NewEgg.com</a>	33554432	97.99	16-18-18-38	2x 16GB DIMM DDR4-3000 @ \$97.99 + free shipping	OLOy	
2021.08	\$3.48	2021	14-Feb	Web	<a href="#">NewEgg.com</a>	33554432	109.99	16-18-18-38	2x 16GB DIMM DDR4-3000 @ \$109.99 + free shipping	G.Skill Aegis	
2021.25	\$4.10	2021	17-Apr	Web	<a href="#">NewEgg.com</a>	67108864	259.99	19-19-19-43	2x 32GB DIMM DDR4-2666 @ \$259.99 + free shipping	G.Skill Value Series	
2021.33	\$3.58	2021	17-May	Web	<a href="#">NewEgg.com</a>	67108864	229.99	19-19-19-43	2x 32GB DIMM DDR4-2666 @ \$229.99 + free shipping	G.Skill Value Series	
2021.5	\$3.99	2021	11-Jul	Web	<a href="#">NewEgg.com</a>	8388608	31.99	cas 11	1x 8GB DIMM DDR3-1600 @ \$31.99 + free shipping	Patriot Signature Line	
2021.58	\$3.79	2021	16-Aug	Web	<a href="#">NewEgg.com</a>	33554432	119.99	15-15-15-36	2x 16GB DIMM DDR4-2133 @ \$119.99 + free shipping	G.Skill Ripjaws V	
2021.67	\$3.28	2021	18-Sep	Web	<a href="#">NewEgg.com</a>	16777216	51.99	19-19-19-43	1x 16GB DIMM DDR4-2666 @ \$51.99 + free shipping	G.Skill Aegis	
2021.75	\$3.07	2021	20-Oct	Web	<a href="#">NewEgg.com</a>	16777216	48.99	17-17-17-39	1x 16GB DIMM DDR4-2400 @ \$48.99 + free shipping	G.Skill Aegis	
2021.92	\$2.66	2021	15-Dec	Web	<a href="#">NewEgg.com</a>	33554432	84.99	19-19-19-43	2x 16GB DIMM DDR4-2666 @ \$84.99 + free shipping	G.Skill Aegis	
2022	\$2.87	2022	19-Jan	Web	<a href="#">NewEgg.com</a>	33554432	92.99	19-19-19-43	2x 16GB DIMM DDR4-2666 @ \$92.99 + free shipping	G.Skill Aegis	
2022.08	\$2.97	2022	17-Feb	Web	<a href="#">NewEgg.com</a>	33554432	93.99	19-19-19-43	2x 16GB DIMM DDR4-2666 @ \$93.99 + free shipping	G.Skill Aegis	
2022.17	\$3.17	2022	18-Mar	Web	<a href="#">NewEgg.com</a>	33554432	99.99	16-20-20-40	2x 16GB DIMM DDR4-3200 @ \$99.99 + free shipping	Team T-Force Vulcan TUF G.A.	
2022.25	\$3.17	2022	23-Apr	Web	<a href="#">NewEgg.com</a>	16777216	50.98	17-17-17-39	1x 16GB DIMM DDR4-2400 @ \$49.99 + \$0.99 shipping	G.Skill Aegis	
2022.33	\$2.76	2022	15-May	Web	<a href="#">NewEgg.com</a>	33554432	87.99	cas 22	1x 32GB SO-DIMM DDR4-3200 @ \$87.99 + free shipping	G.Skill Ripjaws	
2022.42	\$2.66	2022	18-Jun	Web	<a href="#">NewEgg.com</a>	33554432	84.97	cas 22	2x 16GB SO-DIMM DDR4-3200 @ \$84.97 + free shipping	Silicon Power	
2022.58	\$2.36	2022	20-Aug	Web	<a href="#">NewEgg.com</a>	33554432	74.99	cas 22	1x 32GB SO-DIMM DDR4-3200 @ \$74.99 + free shipping	OLOy	
2022.67	\$2.25	2022	16-Sep	Web	<a href="#">NewEgg.com</a>	33554432	72.99	cas 19	1x 32GB SO-DIMM DDR4-2666 @ \$72.99 + free shipping	Silicon Power	
2022.75	\$2.25	2022	18-Oct	Web	<a href="#">NewEgg.com</a>	33554432	72.99	cas 19	2x 16GB SO-DIMM DDR4-2666 @ \$72.99 + free shipping	Silicon Power	
2022.83	\$2.15	2022	5-Nov	Web	<a href="#">NewEgg.com</a>	33554432	69.99	cas 19	1x 32GB SO-DIMM DDR4-2666 @ \$69.99 + free shipping	Silicon Power	
2022.92	\$2.15	2022	18-Dec	Web	<a href="#">NewEgg.com</a>	33554432	68.99	17-17-17-39	2x 16GB DIMM DDR4-2400 @ \$68.99 + free shipping	G.Skill Aegis	
2023	\$2.05	2023	18-Jan	Web	<a href="#">NewEgg.com</a>	33554432	63.98	cas 19	1x 32GB SO-DIMM DDR4-2666 @ \$61.99 + \$1.99 shipping	G.Skill Ripjaws	
2023.08	\$1.84	2023	18-Feb	Web	<a href="#">NewEgg.com</a>	67108864	114.99	cas 22	2x 32GB SO-DIMM DDR4-3200 @ \$114.99 + free shipping	Mushkin Enhanced Essentials	
2023.17	\$1.84	2023	18-Mar	Web	<a href="#">NewEgg.com</a>	67108864	114.99	22-22-22-52	2x 32GB SO-DIMM DDR4-3200 @ \$114.99 + free shipping	Mushkin Enhanced Essentials	
2023.33	\$1.54	2023	6-May	Web	<a href="#">NewEgg.com</a>	67108864	97.99	cas 22	2x 32GB SO-DIMM DDR4-3200 @ \$97.99 + free shipping	Team Elite	
2023.42	\$1.46	2023	17-Jun	Web	<a href="#">NewEgg.com</a>	67108864	93.99	19-19-19-43	2x 32GB DIMM DDR4-2666 @ \$93.99 + free shipping	Mushkin Enhanced Essentials	
2023.5	\$1.43	2023	18-Jul	Web	<a href="#">NewEgg.com</a>	33554432	45.99		2x 16GB SO-DIMM DDR4-3200 @ \$45.99 + free shipping	Team T-Create Classic	
2023.67	\$1.45	2023	19-Sep	Web	<a href="#">NewEgg.com</a>	67108864	92.99	16-19-19-38	2x 32GB DIMM DDR4-3200 @ \$92.99 + free shipping	Mushkin Enhanced Redline Stiletto	
2023.75	\$1.40	2023	20-Oct	Web	<a href="#">NewEgg.com</a>	67108864	89.99	22-22-22-52	2x 32GB SO-DIMM DDR4-3200 @ \$89.99 + free shipping	Team T-Create Classic	
2023.83	\$1.31	2023	16-Nov	Web	<a href="#">NewEgg.com</a>	33554432	41.99	16-17-17-36	2x 16GB SO-DIMM DDR4-2666 @ \$41.99 + free shipping	Mushkin Enhanced Redline	
2024.00	\$1.61	2024	14-Jan	Web	<a href="#">NewEgg.com</a>	67108864	102.99	22-22-22-52	2x32 GB SO-DIMM DDR4-3200 @ \$102.99 + free shipping	Team Elite	
2024.08	\$1.72	2024	21-Feb	Web	<a href="#">NewEgg.com</a>	67108864	109.99	22-22-22-52	2x32 GB SO-DIMM DDR4-3200 @ \$109.99 + free shipping	Mushkin Enhanced Essentials	
2024.17	\$1.57	2024	21-Mar	Web	<a href="#">NewEgg.com</a>	67108864	99.99	16-18-18-35	2x32 GB DIMM DDR4-2666 @ \$99.99 + free shipping	Corsair Vengeance LPX	
2024.33	\$1.66	2024	16-May	Web	<a href="#">NewEgg.com</a>	33554432	52.99	22-22-22-52	2x16 GB DIMM DDR4-3200 @ \$52.99 + free shipping	Team Elite	
2024.33	\$3.12	2024	28-Jul	Web	<a href="#">NewEgg.com</a>	33554432	99.99	20-26-26-46	2x32 GB DIMM DDR4-3600 @ \$99.99 + free shipping	Patriot Viper Elite	
2024.33	\$1.57	2025	15-Apr	Web	<a href="#">NewEgg.com</a>	33554432	49.99	15-20-20	Kingston FURY Beast 32GB DDR4 3200MHz DIMM Memory Moc kingston fury		