

Unified Memory Systems Comparison

Recent Releases with 128GB+ RAM — Prices, Availability, Pros & Cons

Executive Summary

- **Apple Mac Studio (M5 Max / M5 Ultra)** — Available since Sept 22, 2026, offering up to 128GB (Max) / 512GB (Ultra) unified memory at top-tier bandwidth (up to 1.2 TB/s). Best choice for maximum speed and Apple ecosystem integration, priced from \$2,499 (Max) to \$5,499 (Ultra).
- **AMD Ryzen AI Max+ 395 — Strix Halo** — Launched with up to 128GB unified memory, currently ~\$2,600–\$5,000+ due to the 2026 memory shortage. Cheapest accessible option matching M4 Max capacity; advantages on bandwidth and price, limited by lower memory bandwidth.
- **AMD Gorgon Halo (Ryzen AI Max+ 495)** — Coming in second half of 2026, offering up to 192GB unified memory. Higher capacity than Strix Halo but not yet available for purchase with confirmed pricing.
- **Key Tradeoff:** 2026 unified memory shortage has compressed AMD's cost advantage, narrowing the price gap with Apple Silicon across all 128GB+ platforms.

System Details

1. Apple Mac Studio (M5 Max / M5 Ultra)

Specification	Detail
Release Date	August 25, 2026 (pre-order; shipments Sep 22, 2026)
Max Unified Memory	128GB (M5 Max) / 512GB (M5 Ultra)
Memory Bandwidth	614 GB/s (M5 Max) / 1.2 TB/s (M5 Ultra)
Starting Price	\$2,499 (M5 Max) / \$5,499 (M5 Ultra)
Availability	Pre-order Aug 25; shipments from Sep 22, 2026

Pros

- Best-in-class memory bandwidth; up to 1.2 TB/s on M5 Ultra
- Enormous capacity (up to 512GB) for maximum model size
- Seamless Apple Silicon ecosystem with macOS 27, MLX, and Core AI
- Up to 4.3x faster AI compute vs. M3 Ultra

Cons

- Most expensive option across the lineup
- 2026 memory shortage has raised prices well above base config

2. AMD Ryzen AI Max+ 395 — Strix Halo

Specification	Detail
Release Date	Launched late 2025 / early 2026
Max Unified Memory	128GB LPDDR5x-8000
Memory Bandwidth	256 GB/s (theoretical) / ~215 GB/s measured

Architecture	16 Zen 5 cores / Radeon 8060S (40 CU, RDNA 3.5)
Starting Price	~\$2,600–\$5,000+ (128GB config, 2026 prices)
Availability	Available for purchase; 2026 shortage has pushed prices up

Pros

- Cheapest accessible option at 128GB unified memory
- Capacity matches Apple M4 Max (128GB)
- Supports both Windows and Linux — most flexible OS option
- Can load models up to ~200B parameters locally

Cons

- Memory bandwidth trails Apple's M-series significantly
- On Windows, GPU capped by fixed BIOS memory carve-out
- Dense model generation is slow (e.g., ~11 tok/s on 235B model)

3. AMD Gorgon Halo (Ryzen AI Max+ 495) — Coming Soon

Specification	Detail
Release Date	Expected second half of 2026
Max Unified Memory	192GB (~160GB usable as video RAM)
Memory Bandwidth	Not yet specified
Architecture	Zen 5 / RDNA 3.5; newer SKUs (495/492/490)
Starting Price	Not yet available; pricing TBA
Availability	Not yet available for purchase

Pros

- 10% faster memory clock and bandwidth vs. Strix Halo
- Doubles memory capacity: 192GB vs. 128GB (Strix Halo)
- AMD's second-generation Halo platform with further optimization

Cons

- Not yet released or available for purchase
- Pricing not officially confirmed; subject to change

Summary Comparison

Feature	Apple Mac Studio (M5 Max / Ultra)	AMD Strix Halo	AMD Gorgon Halo
Max Memory	128GB / 512GB	128GB	192GB
Memory Bandwidth	614 GB/s / 1.2 TB/s	256 GB/s	Not specified
Release Status	Available (Sep 22, 2026)	Launched	Coming (H2 2026)
Starting Price	\$2,499–\$5,499+	~\$2,600–\$5,000+	TBA
Best For	Max speed & Apple ecosystem	Best value / most accessible	Future max capacity

Key Takeaways

- **Best Overall Performance:** Apple Mac Studio (M5 Max / Ultra) leads on memory bandwidth and capacity, making it the strongest choice for extreme workloads.
- **Best Value:** AMD Strix Halo offers the most affordable path to 128GB unified memory, though the 2026 shortage has pushed prices up and compressed its traditional cost advantage.
- **Future Outlook:** The Gorgon Halo represents AMD's direction with 192GB unified memory, but it is not yet available with confirmed pricing or availability.
- **Important Note:** Current prices fluctuate with the 2026 unified memory shortage. Always check live pricing before purchasing any of these systems.