

Samsung launches super-fast GDDR7 graphics memory

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High-quality video memory standards GDDR6 and GDDR6X are no longer a strange concept in the graphics card market, especially after a period of hot growth in recent years. Indeed, the first GPU model to launch with GDDR6 memory was the RTX 2000 series, which was released by Nvidia in early 2019. Shortly after, the GDDR6X memory standard was released with the RTX 3000 series in 2020, although GDDR6 is still in the early stages of widespread use.

And while the GDDR6X standard is currently in the mass adoption stage, Samsung has just announced that it has completed development of GDDR7 memory for commercial GPUs, ahead of all other computer memory R&D and manufacturing units worldwide. Thus, from the time of announcing the start of the research process of new memory technology, the Korean technology giant only needed 8 months to develop GDDR7 VRAM with many outstanding improvements.



So how good is GDDR7 really? According to early reports, the Samsung-made GDDR7 chip can reach a whopping 1.5 terabytes per second (TBps) and it also boasts impressive per-pin performance, up to 32Gbps. This is because the GDDR7 standard uses PAM3 signaling, allowing 50% more data to be transferred per cycle than the previous NRZ method. For comparison, the GDDR6 chip that Samsung announced last year only hit 1.1 TB/s.

Furthermore, GDDR7 is also more power efficient than GDDR6, albeit for a faster speed. Samsung says the improvements in GDDR7 include a 40% increase in performance and a 20% reduction in energy consumption compared to the existing GDDR6 standard.

In addition, Samsung also revealed that its GDDR7 memory is made from highly conductive epoxy molding compound (EMC), which improves heat dissipation and ensures stable performance during intensive high-speed operations.

Basically, GDDR6 is inherently very fast, responding well to the game processing ability of the graphics card. But the appearance of GDDR7 is not superfluous. The new technology is expected to further boost efficiency in AI processing as well as high-performance computing.

Of course, it will be a while before we actually see GDDR7 memory actually appear on consumer GPUs. That could be the time when NVIDIA and AMD are ready to introduce the RTX 5000 and RX 8000 series of GPUs respectively.

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