

As with all hot topics, there are facts and myths. Five HBM Facts:

- -HBM volume is increasing. It was 11% of bits and 20% of revenue. This will grow to approximately 20% of bits over the next 4 years based on current models. The supply growth has to be relatively steady (capacity/designs are HBM specific), but the demand growth will be wildly variable. There are impacts from this supply and demand disconnect.
- -HBM3 cost is ~4x DDR5 Cost (our model is 3.5x but who is counting?). HBM3 price is ~6x DDR5 Price .... but prices are wildly changing. Gross margin per wafer, margin per COS, margin per revenue was higher but may change with DDR Pricing. Due to overhead of HBM specific designs, testing, and manufacturing, Operating margin can be challenging and needs to be managed. Do not assume that HBM is the only engine for the current earnings increases by memory companies. HBM4 will add more complexity to this as well.
- HBM is stacked, packaged, and tested as a unit before going to customer or their contractor for assembly in CoWoS/Foveros type assembly. The packaging of HBM is typically done by the memory company or their contractor. Some recent “cartoons” seem to show memory chip stacking as part of CoWoS process. It is not.
- In Advanced Datacenter AI systems, Most of the memory bits are still DDR5 and most of the cost is now processor/HBM module. This will be true after HBM4 ramps in late 2026 as well.
- I think everyone would agree that HBM is THE competitive focus of all memory companies. Current APPROXIMATE models show Hynix with 55% share, Samsung with 25% share and Micron with 20% share after great growth. These share battles will cause wild fluctuation in market share and pricing and revenue. You have been warned

All memory is constrained and on allocation now. We expect to see the “New normal” based on allocations in July 2026 timeframe.

We have all the numbers on price, cost, revenue and bit volumes. Contact us to discuss more

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