

Samsung launched the 36GB HBM3E 12H DRAM with a series of impressive upgrades

There is a growing need for high-capacity HBM memory from industry AI service providers, and Samsung's new HBM3E 12H product has been designed to effectively meet that need.

Samsung has just introduced a new 'breakthrough' achievement in the field of DRAM production: HBM3E 12H. This event marks an important milestone for not only Samsung but the entire market when for the first time a commercial 12-cell HBM3E DRAM model was officially launched, and is also a "high-capacity HBM product". best so far".

The HBM3E 12H memory provides up to 1,280 gigabytes per second (GB/s) of bandwidth, along with 36 gigabytes of storage capacity. Both of these aspects have an improvement of more than 50% compared to the HBM3 8H platform. Samsung used advanced thermocompressed non-conductive film (TC NCF) technology in a 12-layer configuration, maintaining the same height specification as the 8-layer version to meet existing HBM package requirements.

Samsung's executive vice president of memory products, Yongcheol Bae, said:

There is a growing need for high-capacity HBM memory from industry AI service providers, and Samsung's new HBM3E 12H product has been designed to effectively meet that need. This new memory solution is part of our effort to develop core technologies for high-end, technology-led HBM for the high-power HBM memory market in the AI ??era.



This technological advancement offers a series of additional benefits, especially in addressing chip die warping issues associated with thin dies in large stack designs. According to Samsung, the advantage of reducing the thickness of NCF material has helped create extremely small gaps between chips at 7 micrometers (μm), and eliminate gaps between layers. As a result, the vertical density has been improved, exceeding that of HBM3 8H by 20%.

Samsung's successful application of TC NCF extends to the benefit of improving the thermal properties of HBM. This is achieved by allowing contact points to be deployed in various sizes between chips. During chip bonding, smaller contact areas are placed in the signal area, while larger areas are designated for effective heat dissipation.

The presence of HBM3E 12H memory in AI applications is expected to increase the average speed of the AI ?? training pipeline by 34%, with the ability to expand the number of concurrent users of the inference service to more than 11, 5 times.

Samsung has started sending the HBM3E 12H model to partners and is expected to mass produce it in the first half of this year.

You finished reading the article "**Samsung launched the 36GB HBM3E 12H DRAM with a series of impressive upgrades**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.