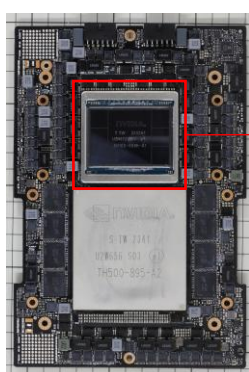


HBM3: NVIDIA GH200_HBM3 Implementation Technology Analysis Report (Announcement) (Cross-section, Materials and Plan-view Observation)



GH200-based board



Hopper GPU

Report Overview

The NVIDIA GH200 Grace Hopper Superchip, introduced to meet the explosive demand for generative AI and HPC, represents a flagship example of advanced packaging technology that tightly integrates the CPU and GPU while connecting HBM3 memory through a silicon interposer. In 3D-stacked HBM, optimizing factors such as the bonding of densely arranged TSVs and the selection of underfill materials is critical from a thermal-management standpoint.

This report focuses on the implementation architecture of the NVIDIA GH200 featuring next-generation HBM3. We present cross-sectional structural and materials analyses, plan-view observations of the memory-controller region, and plan-view observations of the HBM dies, and summarize the notable features identified

Product Overview

- **HBM Memory:** Incorporates HBM3, delivering memory bandwidth on the order of 10 TB/s, ideal for large-scale AI and HPC applications.
- **The device adopts a 2.5D packaging architecture:** Placing multiple 3D-stacked HBM3 modules around the GPU die and interfacing them via a silicon interposer.

Report Contents

- Cross-sectional analysis and materials analysis of HBM3
- Materials analysis of the underfill (inorganic filler and basic resin characterization)
- Plan-view observation of the memory-controller chip (top metal)
- Plan-view observation of HBM3 (top metal)

Please contact us for report pricing. Release day will be in early March.

Analysis Area

HBM Cross-Section Observation Area

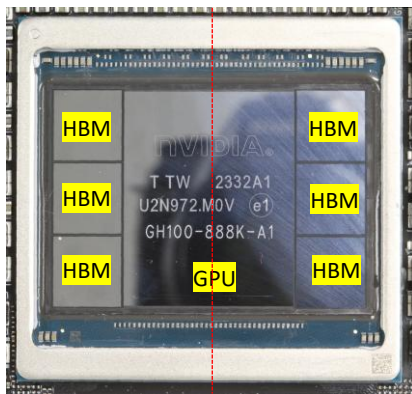
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Controller Plan-View Observation Area

- Plan-view observation of the memory-controller chip (top metal)

HBM Plan-View Observation Area

- Plan-view observation of HBM3 (top metal)



Hopper GPU

