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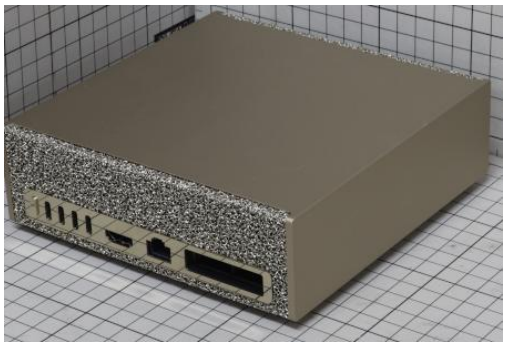
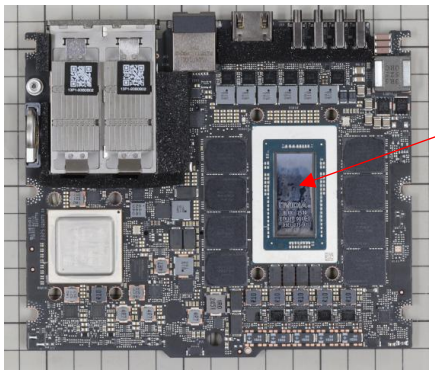
AI Computer : Nvidia GB10 Grace Blackwell in NVIDIA DGX Spark Package and Main PCB detailed analysis



NVIDIA DGX Spark™



Main PCB

Product outline

The NVIDIA DGX Spark™ is one of the world's smallest AI supercomputers equipped with the GB10 Grace Blackwell Superchip. Despite its desktop-sized form factor, it delivers up to 1 petaflop of performance and provides a highly efficient system capable of running 200-billion-parameter generative AI models locally.

The GB10 Grace Blackwell Superchip is NVIDIA's latest AI-focused SoC, announced in 2025, and is an innovative chip that integrates a CPU and GPU to achieve petaflop-class computing performance.

The GB10 combines the Grace CPU and Blackwell GPU using 2.5D integration technology and features a compact, high-efficiency package with 128 GB of unified memory.

Report overview

LTEC plans to release the following five reports:

1. Product teardown
   Investigation of key semiconductor and passive components mounted on the PCB
2. L/W measurements of the finest features across all 14 PCB layers
   As an option PCB pattern CAD data will be available
3. Image data for all 12 package layers:
   As an option Package pattern CAD data will be available
4. Cross-sectional analysis of the PCB and package
5. Chip analysis (top layer, gate layer, and SEM cross-section of the seal ring)

Please refer next page for details

Report No.: 25R-0698-1,2,3,4,5 Release :

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1. Product Teardown Report: 25R-0689-1

Scheduled Release: January 30

- Product teardown process
- Investigation of mounted semiconductor and passive components
- Datasheets (if available)
- Enlarged photos of mounted components such as sockets

2-1. PCB Layer (14 Layers) Fine Feature L/W Measurement: 25R-0689-2

Scheduled Release: March 31

- Measurement of minimum line width and line pitch across all 14 layers

2-2. Option: CAD Data

Scheduled Release: March 31

- Identification of power and ground lines
- ODB++, Gerber, etc.

3-1. Package Layer (12 Layers) Image Data: 25R-0689-3

Scheduled Release: February 27

- Wiring information (photos of all 12 layers, line width, line pitch)

3-2. Option: CAD Data

Scheduled Release: March 31

- Identification of power and ground lines
- ODB++, Gerber, etc.

4. PCB and Package Cross-Section Analysis: 25R-0689-4

Scheduled Release: January 30

- Package X-ray images
- Cross-sectional structure
- Layer thickness measurements

5-1. Chip Structural Analysis: 25R-0689-5

Scheduled Release: March 31, 2026

- SEM cross-section of the seal ring
- Top-layer and gate-layer images

5-2. Option: Floorplan Analysis

Scheduled Release: April 15, 2026

Note:

Please contact us for schedule and pricing.

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