Samsung has completed the basic design of the 2nd generation 2nm GAA process, expected to be applied to future Exynos chips.

According to a new report from SamMobile, Samsung Foundry has made significant progress with the 2nm manufacturing process, paving the way for the launch of the Exynos 2600 chipset at 2nm.

Advances in the first-generation 2nm GAA process suggest that Samsung is regaining its position in the semiconductor industry and could compete directly with TSMC in the coming years. A new report says that the South Korean tech giant has completed the basic design for its second-generation 2nm GAA process, which is expected to be widely used, including mass-producing future Exynos chips.

Leaks indicate that the yield rate of the first-generation 2nm GAA process is improving, and if the second-generation development progresses as planned, Samsung could implement the new process right away in the Exynos 2700 series.

Early signs suggest that Samsung is working to restore its semiconductor manufacturing competitiveness with its second-generation 2nm GAA process (also known as SF2P). While trial production of the Exynos 2600 is underway, Samsung's LSI and semiconductor division is aiming to achieve a yield rate of 50% in the next few months. Compared to the first generation, SF2P brings the following notable improvements:

1. 12% increase in performance
2. 25% reduction in power consumption
3. Chip area reduced by 8%

The report doesn't mention which customers are interested in Samsung's new process, but Qualcomm is expected to be a potential candidate. The Snapdragon 8 Elite Gen 2 - a Galaxy S25 exclusive - is said to be manufactured on Samsung's 2nm GAA wafer, suggesting Qualcomm could continue its multi-sourcing strategy between Samsung and TSMC.

Attention remains focused on the first-generation 2nm GAA process, as fierce competition in this segment will push major semiconductor manufacturers to maximize their capabilities.

Samsung Foundry has been struggling in 2024, and even Korean sources reported that the company has cut its investment in the division by more than half, allocating only 5 trillion won (about $3.5 billion) to Foundry operations by 2025. Furthermore, Samsung may consider outsourcing the production of Exynos chips to a third party, namely TSMC.

However, Samsung is not alone in this race. Renowned Apple analyst Ming-Chi Kuo has said that Apple will launch the iPhone 18 series with 2nm chips in the second half of 2026. According to Kuo, TSMC's testing capacity has reached a significant rate and is constantly improving.