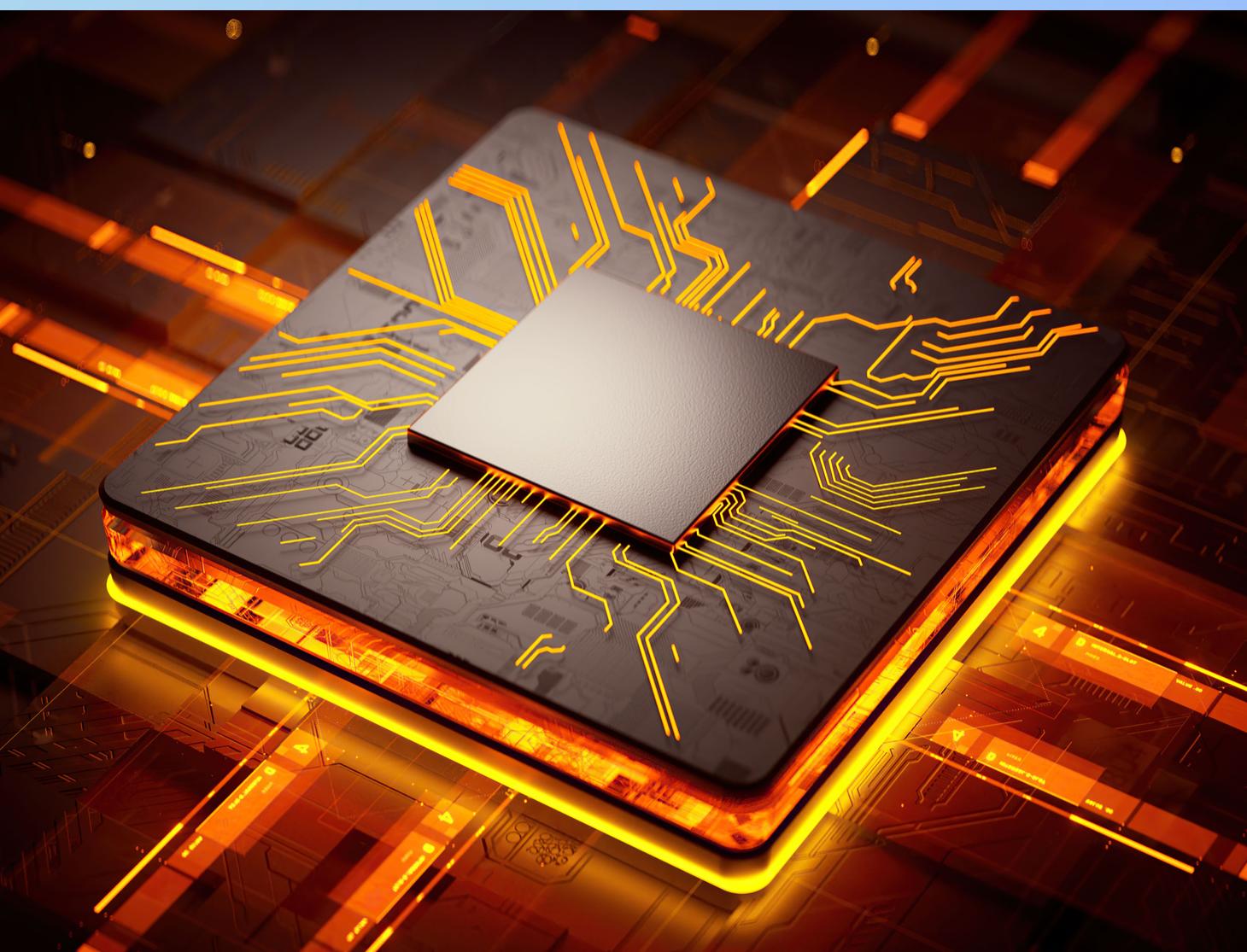


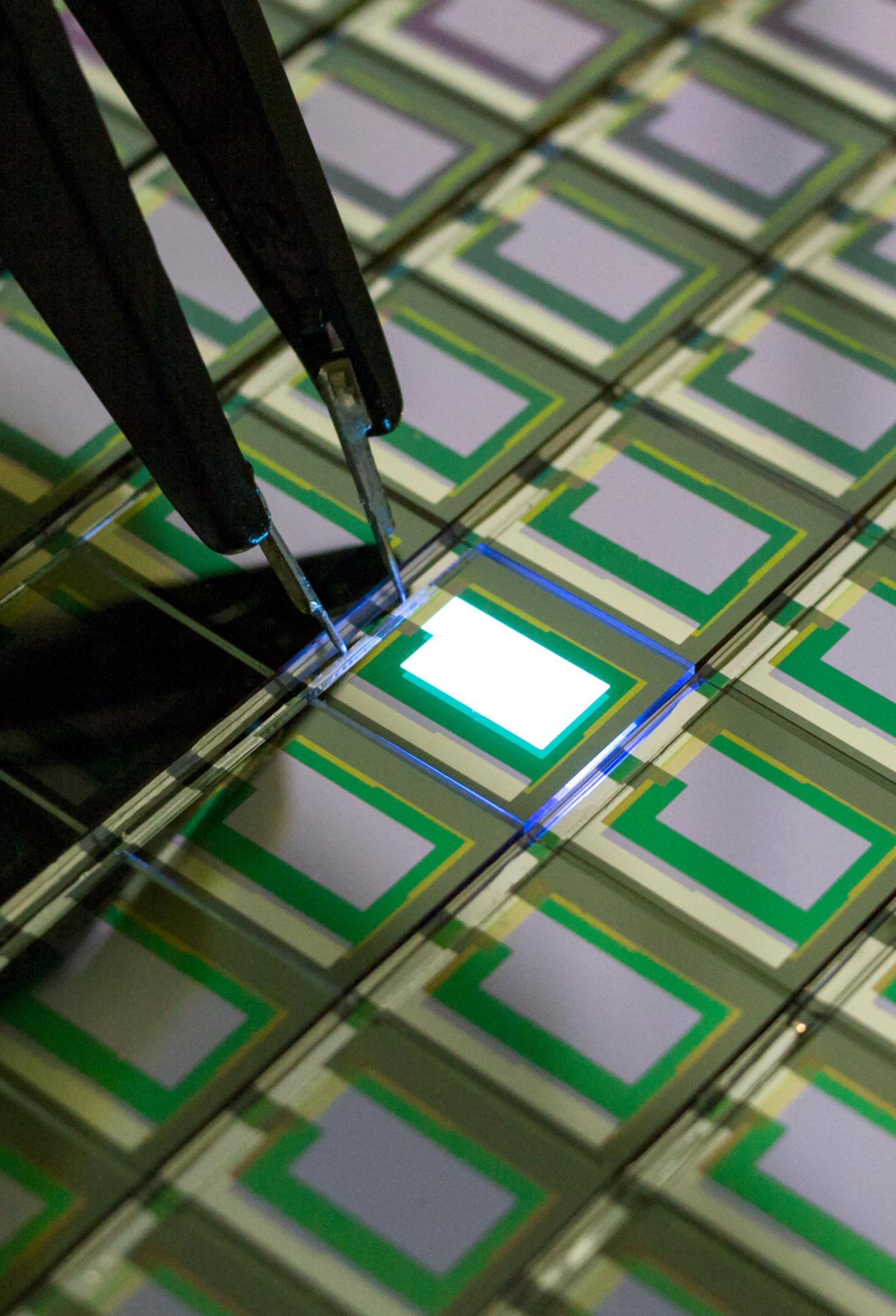


**SAMSUNG ELECTRONICS PIONEERS THE FUTURE
OF SEMICONDUCTOR MANUFACTURING:
UNVEILS ADVANCED STRATEGIES AND
INNOVATIONS AT FOUNDRY
FORUM 2023**

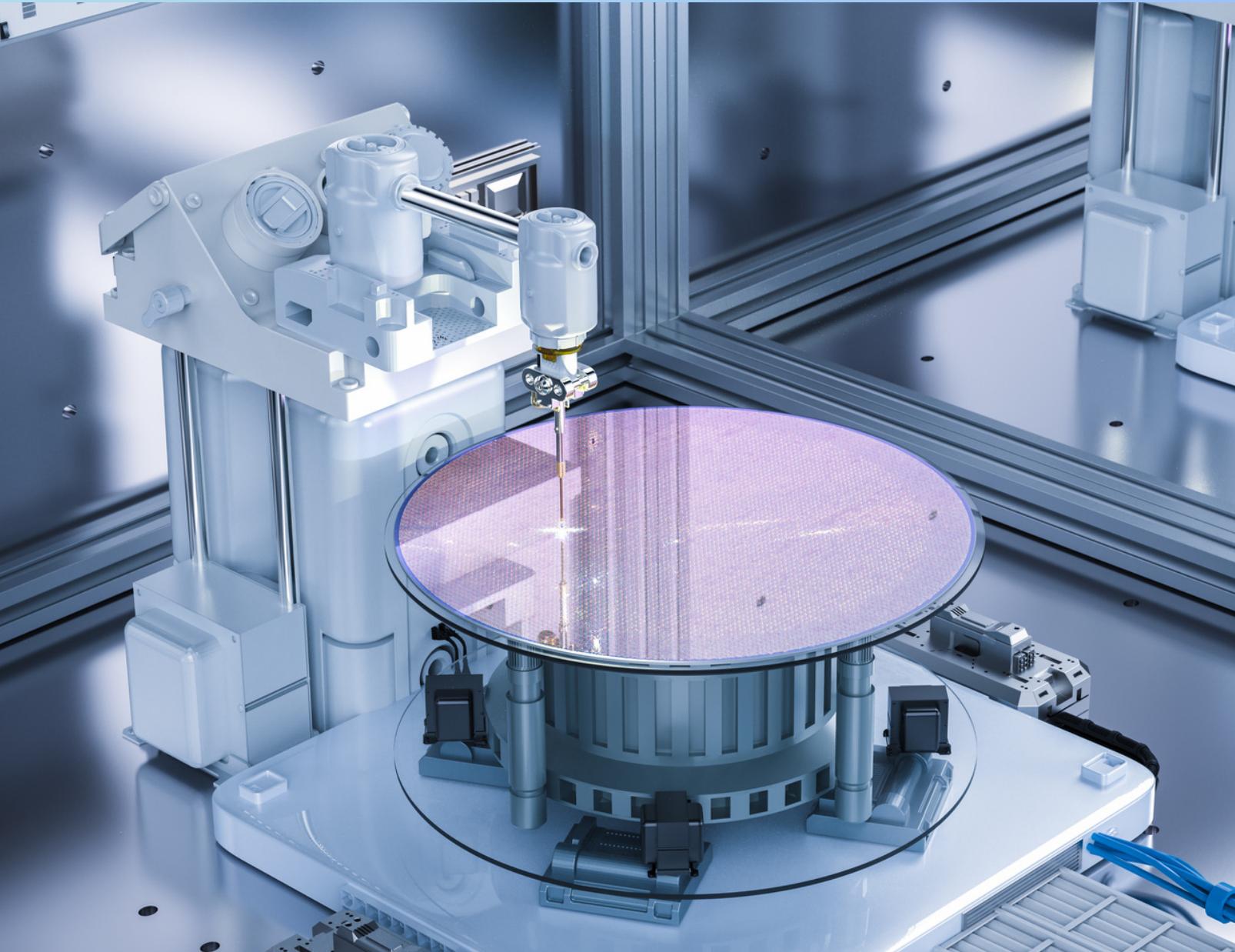
- At the Samsung Foundry Forum (SFF) 2023, Samsung Electronics outlined its technology innovations and business strategy with a focus on meeting customer needs in the AI era.



- Samsung Foundry aims to enhance its position as a leading foundry service provider through strategic developments such as the expansion of its 2-nanometer (nm) process and specialty process, increased production capacity at its Pyeongtaek fab Line 3, the launch of the Multi-Die Integration (MDI) Alliance for next-gen packaging technology, and the continued progress of the Samsung Advanced Foundry Ecosystem (SAFE™).



- Samsung will begin mass production of the 2nm process for mobile applications in 2025, expanding to high-performance computing (HPC) in 2026 and automotive in 2027. Compared to the 3nm process, the 2nm process offers a 12% increase in performance, 25% increase in power efficiency, and 5% decrease in area. Mass production of the SF1.4 process will start in 2027 as planned.



- Samsung will begin foundry services for 8-inch gallium nitride (GaN) power semiconductors in 2025, targeting consumer, data center, and automotive applications. Furthermore, they are developing the 5nm Radio Frequency (RF) for 6G, promising a 40% increase in power efficiency and 50% decrease in area compared to the 14nm process. Automotive applications will also be added to the 8nm and 14nm RF.



- To meet customer demands, Samsung Foundry is increasing its manufacturing capacity by adding new manufacturing lines in Pyeongtaek, South Korea, and Taylor, Texas, aiming to increase its clean room capacity by 7.3 times by 2027 compared to 2021.



- In response to the rapid growth in the chiplet market, Samsung has launched the MDI Alliance to lead innovation in stacking technology, aiming to form a packaging technology ecosystem for 2.5D and 3D Heterogeneous Integration.



- Samsung is hosting the SAFE™ Forum to promote the growth of the foundry ecosystem. It supports stronger collaboration among partners across the foundry ecosystem and offers over 80 design tools and is collaborating with 10 OSAT partners for developing 2.5D/3D packaging design solutions.



Analysis:

Samsung Foundry's strategy is multi-pronged. It's focusing on developing advanced, more efficient, and smaller scale (2nm) technologies. The emphasis on the 2nm process and specialty process, 5nm RF for 6G, and 8-inch GaN power semiconductors show a commitment to driving the frontiers of semiconductor technology.



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