GlobalFoundries Unveils GF Labs to Accelerate Technology Innovation

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Program advances long-term technology roadmap and reinforces company's commitment to drive technology leadership of differentiated foundry solutions

San Jose, Calif., May 19, 2022 – At its annual GF Technology Summit (GTS), GlobalFoundries (Nasdaq: GFS) (GF) today announced the launch of GF Labs, a new program that extends the development horizon of innovative, differentiated semiconductor technology and broadens the company's portfolio of feature-rich and enablement solutions. GF Labs will focus on advancing new technology and long-term roadmap differentiation that will enable GF customers to develop innovative products and accelerate their time-to-market.

Semiconductor innovation is essential to the growth and development of technology megatrends that are reshaping the global economy including the Internet of Things (IoT), 5G, 6G, cloud computing, artificial intelligence (AI), quantum computing and next generation automotive, all of which are propelling semiconductor market revenue to more than $1.3 trillion by the end of the decade, according to International Business Strategies.

GF has a proven track record of innovating novel materials such as FD-SOI on 22FDX®, and novel device architectures that enabled GF Fotonix™, the company's recently announced next generation silicon photonics platform.

GF Labs expands and accelerates this innovation momentum by creating an open framework of internal and external research and development initiatives that deliver a differentiated pipeline of market-driven process technology solutions for future data-centric, connected, intelligent and secure applications.

"Fostering semiconductor innovation is critical to delivering a differentiated technology portfolio that will continue to fuel emerging markets," said Gregg Bartlett, senior vice president of Technology, Engineering and Quality, GF. "Our focus is on making sure we're always developing the latest technologies that provide meaningful differentiation for our customers, not just in the near-term, but far into the next decade. The launch of GF Labs accelerates our pursuit of the innovation it takes to develop and deliver powerful technological advances for our customers."

GF has a proven track record of building partnerships with startup innovators, industry consortia, material suppliers, universities and government entities worldwide. Leveraging GF's extensive patent portfolio and deep technical expertise in digital, analog, mixed-signal, RF and embedded memory, GF Labs will harvest capabilities from a broad research platform including the Interuniversity Microelectronics Centre (IMEC) in Belgium, Fraunhofer in Germany, Defense Advanced Research Projects Agency (DARPA) in the U.S., and the Institute for Microelectronics in Singapore, along with a broad network of university partnerships.

Research and development within GF Labs is underway with a slate of innovative technology capabilities and solutions already in development such as radio frequency silicon on insulator (RFSOI) and silicon-germanium (SiGe). GF will continue to invest to expand and develop tailored solutions, with GF Labs serving as the R&D engine accelerating differentiated solutions based on wide-band-gap semiconductors that go beyond the traditional approach of shrinking transistors. Additional program details and partners will be announced in the second half of 2022.

Supporting Quotes

"We have a wide research portfolio in high-performance computing, cryogenic electronics, bioelectronics and biosensors, physical-layer security and AI-based design automation. Collaborating with GF allows us the freedom to explore innovative ideas, such as integrating advanced SiGe devices with high-performance CMOS technologies to help achieve the required configuration for next-generation wireless electronics."

George White, Ph.D., Director for Strategic Partnerships, Georgia Institute of Technology

"For more than 10 years, we've been working collaboratively with GF to help drive technology innovation across multiple dimensions. The launch of GF Labs will enable tomorrow's more intelligent and intuitive, more connected and secure, and more powerful and energy-efficient technology solutions. We are committed to continue collaborating on advanced semiconductor R&D with GF, working hand in hand to come up with solutions that make the high-tech industry grow."

Luc Van den hove, President and CEO, imec

"IQE's collaboration with GF on GaN accelerates the development of differentiated technology platforms that enable smart mobile devices, wireless infrastructure, power electronics and next generation displays."

Americo Lemos, CEO, IQE

"Micledi has developed a unique and innovative solution for microLED arrays. Our technology is based on an innovative combination of III/V materials processing, 3D integration and 300mm silicon-based processing combined with a proprietary ASIC to provide a self-contained, compact monolithic AR display with high image quality and power efficiency. Our partnership with GF is enabling future AR devices and revolutionizing how digital information is delivered to consumers."

Soeren Steudel, Chief Technology Officer, Micledi Microdisplays

"Congratulations to GF for their visionary endeavor with GF Labs. We are delighted to be collaborating with them as a member of the Semiconductor Alliance to accelerate research, innovation and prototyping, and help grow the U.S. semiconductor industry amid increased global competition. Collaboration among industry, government and academia in the

United States will facilitate growth of advanced manufacturing, strengthen supply chains and help protect intellectual property."

Dr. Raj Jammy, Chief Technology Officer, MITRE En*genuity and Director, Semiconductor Alliance*

"Ranovus is dedicated to developing application-specific optical engines that are energy and space efficient to address the massive growth in data center traffic, which is fueled by new compute, storage and networking paradigms. Ranovus' monolithic Odin™ silicon photonics platform leverages the GF Fotonix™ process with its feature-rich libraries together with Ranovus' own proprietary photonic and RF IP blocks, including innovative on-chip lasers, to enable an unprecedented high-density optical interconnect for datacenter applications. This is a great example of the GF and Ranovus teams collaborating to deliver leading-edge solutions."

John Martinho, Senior Vice President of Research and Development, Ranovus

"SOITEC and GF's close collaboration on state-of-the-art RFSOI and FD-SOI substrate development continues to set the pace for the introduction of market-leading solutions for each generation of mobile connectivity standards."

Bernard Asper, Chief Operating Officer, SOITEC

"GF technologies made 5G mm-wave possible with 45RSOI and 22FDX® processes first used by universities and then by most companies in 5G and SATCOM. It is now taking steps to establish a leadership position in 6G. We've been collaborating on a broad set of high-risk, high-payoff research projects leveraging the unparalleled benefits of FD-SOI, RF-SOI and SiGe technology with demonstrated phased-arrays and transceivers up to 180 GHz and together, we are pushing the limits. GF has been a great partner, with an accurate design kit at greater than 100 GHz. They also support innovative work and enable the successful demonstration of complex 6G systems."

Gabriel M. Rebeiz, Ph.D., Distinguished Professor and the Wireless Communications Industry Endowed Chair at the UC San Diego

About GF

GlobalFoundries, Inc. (GF) is one of the world's leading semiconductor manufacturers. GF is redefining innovation and semiconductor manufacturing by developing and delivering feature-rich process technology solutions that provide leadership performance in pervasive high growth markets. GF offers a unique mix of design, development and fabrication services. With a talented and diverse workforce and an at-scale manufacturing footprint spanning the U.S., Europe and Asia, GF is a trusted technology source to its worldwide customers. For more information, visit www.gf.com.

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