



GLOBALFOUNDRIES and Dolphin Integration to Deliver Differentiated FD-SOI Adaptive Body Bias Solutions for 5G, IoT and Automotive Applications

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IP to accelerate energy-efficient SoC designs and push the boundaries of single-chip integration

Santa Clara, Calif. and Grenoble, France, February 19, 2019 – GLOBALFOUNDRIES (GF) and Dolphin Integration, a leading provider of semiconductor IP, today announced a collaboration to develop a series of adaptive body bias (ABB) solutions to improve the energy efficiency and reliability of system-on-chip (SoC) on GF's 22nm FD-SOI (22FDX®) process technology for a wide range of high-growth applications such as 5G, IoT and automotive.

As part of the collaboration, Dolphin Integration and GF are working together to develop a series of off-the-shelf ABB solutions for accelerating and easing body bias implementation on SoC designs. ABB is a unique 22FDX feature that enables designers to leverage forward and reverse body bias techniques to dynamically compensate for process, supply voltage, temperature (PVT) variations and aging effects to achieve additional performance, power, area and cost improvements beyond those from scaling alone.

The ABB solutions in development consist of self-contained IPs embedding the body bias voltage regulation, PVT and aging monitors and control loop as well as complete design methodologies to fully leverage the benefits of corner tightening. GF's 22FDX technology offers the industry's lowest static and dynamic power consumption. With automated transistor body biasing adjustment, Dolphin Integration can achieve up to 7x energy efficiency with power supply as low as 0.4V on 22FDX designs.

"We have been working with GF for more than two years on advanced and configurable power management IPs for low power and energy efficient applications," said Philippe Berger, CEO at Dolphin Integration. "Through our ongoing collaboration with GF, we are focused on creating turnkey IP solutions that allow designers to realize the full benefit of FD-SOI for any SoC design in 22FDX."

"In order to simplify our client designs and shorten their time-to-market, GF and our ecosystem partners are helping to pave the way to future performance standards in 5G, IoT and automotive," said Mark Ireland, vice president of ecosystem partnerships at GF. "With the support of silicon IP providers like Dolphin Integration, new power, performance and reliability design infrastructures will be available to customers to fully leverage the benefits of GF's 22FDX technology."

Design kits with turnkey adaptive body bias solutions on GF's 22FDX will be available starting in Q2 2019.

About Dolphin Integration

Founded in 1985, Dolphin Integration currently employs 160 employees in their head office located in Meylan, France and operates subsidiaries in Canada and Israel. Dolphin Integration develops semiconductor IPs mainly serving high volume fabless IC companies and offers integrated circuit design services to customers worldwide. Conscious of AI, IoT, mobile and automotive products' explosive growth and potential environmental impact, Dolphin Integration is committed to accelerating the development of energy-efficient System-on-Chip (SoC) for its customers.

Dolphin Integration is the registered tradename of Dolphin Design SAS.

To learn more about the company, please visit: www.dolphin-integration.com and follow us on Twitter @Dolphin_Int and [LinkedIn](#)

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About GF

GLOBALFOUNDRIES (GF) is a leading full-service foundry delivering truly differentiated semiconductor technologies for a range of high-growth markets. GF provides a unique combination of design, development, and fabrication services, with a range of innovative IP and feature-rich offerings including FinFET, FDX™, RF, and analog/mixed signal. With a manufacturing footprint spanning three continents, GF has the flexibility and agility to meet the dynamic needs of clients across the globe. GF is owned by Mubadala Investment Company. For more information, visit globalfoundries.com.

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