



GLOBALFOUNDRIES Introduces 12LP+ FinFET Solution for Cloud and Edge AI Applications

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Innovative solution based on GF's most advanced FinFET platform offers best-in-class performance, key new features to address evolving AI requirements, compelling economics and industry-leading physical IP from Arm

Santa Clara, Calif., September 24, 2019 – GLOBALFOUNDRIES (GF), the world's leading specialty foundry, announced today at its Global Technology Conference the availability of 12LP+, an innovative new solution for AI training and inference applications. 12LP+ offers chip designers a best-in-class combination of performance, power and area, along with a set of key new features, a mature design and production ecosystem, cost-efficient development and fast time-to-market for high-growth cloud and edge AI applications.

Derived from GF's existing 12nm Leading Performance (12LP) platform, GF's new 12LP+ provides either a 20% increase in performance or a 40% reduction in power requirements over the base 12LP platform, plus a 15% improvement in logic area scaling. A key feature is a high-speed, low-power 0.5V SRAM bit cell that supports the fast, power-efficient shuttling of data between processors and memory, an important requirement for AI applications in the computing and wired infrastructure markets.

Other key features of 12LP+ that enable clients to capitalize on AI market opportunities are a design reference package for AI applications and design/technology co-development (DTCO) services, both of which allow clients to look at AI circuit designs from a holistic perspective in order to achieve lower power budgets and reduced costs. Another key feature is a new interposer for 2.5D packages, which facilitates the integration of high-bandwidth memory with processors for fast, power-efficient data processing.

The 12LP+ solution makes use of [Arm® Artisan® physical IP](#) as well as [POP™ IP](#) for AI applications, developed for GF by Arm. Both solutions from Arm will also be applied to GF's original 12LP platform.

"AI, automotive and high-end consumer mobility are just a few of the growing applications creating urgent demand for high-performance SoCs," said Gus Yeung, general manager and fellow, Physical Design Group, Arm. "Supported by the widely-used Arm Artisan physical IP and advanced processor designs, GLOBALFOUNDRIES' 12LP+ will help designers deliver products that monetize this demand easily, quickly and cost-effectively."

"The rollout of 12LP+ is a result of GF's strategy to provide clients with differentiated solutions that extend the ability to scale designs with no disruption to work flows very cost-efficiently compared to alternatives," said Michael Mendicino, vice president of Digital Technology Solutions at GF. "For example, as an advanced 12nm technology, our 12LP+ solution already offers clients a majority of the performance and power advantages they would expect to gain from a 7nm process, but their NRE (non-recurring engineering) costs will average only about half as much, a significant savings. Additionally, because the 12nm node has been running longer and is much more mature, clients will be able to tape-out quickly and take advantage of the growing demand for AI technology."

The 12LP+ PDK is available now and GF is already working with several clients. Tape outs are expected in the second half of 2020 and volume production is set for 2021 from GF's Fab 8 in Malta, New York.

About GF

GLOBALFOUNDRIES (GF) is the world's leading specialty foundry. We deliver differentiated feature-rich solutions that enable our clients to develop innovative products for high-growth market segments. GF provides a broad range of platforms and features with a unique mix of design, development and fabrication services. With an at-scale manufacturing footprint spanning the U.S., Europe and Asia, 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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