

# QuickLogic Announces the ArcticPro 3 eFPGA IP for Samsung 28FDS Process

- 3rd generation embedded FPGA (eFPGA) technology optimized for Edge AI applications on Samsung's 28nm FD-SOI high performance, ultra-low leakage process
- Enables integration of discrete FD-SOI-based FPGAs into custom ASICs/SoCs for a variety of Artificial Intelligence (AI) and Machine Learning (ML) applications

SAN JOSE, Calif., Oct. 28, 2020 /PRNewswire/ -- QuickLogic Corporation (NASDAQ: QUIK), a developer of ultra-low power multi-core voice-enabled SoCs, embedded FPGA IP, and Endpoint AI solutions, today announced the availability of its [ArcticPro™ 3](#) embedded FPGA (eFPGA) IP, which is now available on Samsung's 28nm FD-SOI process, enabling OEMs and semiconductor companies to seamlessly integrate the capability of discrete FD-SOI FPGAs into their own ASICs/SoCs, greatly optimizing system performance, power consumption and cost for Edge AI use cases in consumer, IoT, and automotive applications.



QuickLogic's ArcticPro 3 eFPGA IP has been designed from the ground up on the Samsung 28FDS process, resulting in a significant boost in performance and delivering ultra-low standby current leakage. The 28FDS process supports body biasing, enabling OEMs and semiconductor companies the ability to "dial in" the ideal performance/power consumption parameters to meet their system requirements.

The ArcticPro 3 IP is developed with a homogenous, reprogrammable fabric architecture based on SLCs (Super Logic Cells), which consist of eight LUT4 + Register blocks, and it uses a hierarchical routing scheme that strikes the optimum performance and power consumption balance needed for computation heavy, battery powered or other power sensitive products. In addition to the logic fabric, the eFPGA IP includes the option to integrate fixed function blocks such as embedded RAM and fracturable Multiply-Accumulate (MAC) blocks to efficiently implement hardware accelerators for neural networks and other computationally intensive circuits foundational in AI/ML applications. ArcticPro 3 is supported by QuickLogic's proprietary tools as well as the ground-breaking QuickLogic Open Reconfigurable Computing ([QORC](#)) vendor-supported open source FPGA development tools, giving designers full control over their system software development environment.

Over the past three decades, QuickLogic's eFPGA IP has been implemented in numerous

SoCs, MCUs, and discrete FPGAs, and shipped in millions of units into multiple end markets such as consumer, IoT, military, and industrial.

"The flexibility inherent in programmable logic is widely recognized as making it an ideal technology for accelerating AI applications," said Mao Wang, senior director of product management at QuickLogic. "However, discrete FPGAs are often too expensive for volume applications and getting data into and out of FPGAs decreases system performance. With today's announcement, companies using Samsung's 28FDS process can now integrate the ArcticPro 3 eFPGA into their own SoC, eliminating the need to use discrete FD-SOI-based FPGAs – saving BOM cost, power consumption, and optimizing system performance."

### **Availability**

QuickLogic's ArcticPro 3 eFPGA technology on Samsung's 28nm FD–SOI process is available now. For more information, please visit <https://www.quicklogic.com/products/efpga/arcticpro-3>.

### **About QuickLogic**

QuickLogic Corporation (NASDAQ: QUIK) is a fabless semiconductor company that develops low power, multi-core semiconductor platforms and Intellectual Property (IP) for Artificial Intelligence (AI), voice and sensor processing. The solutions include embedded FPGA IP (eFPGA) for hardware acceleration and pre-processing, and heterogeneous multi-core SoCs that integrate eFPGA with other processors and peripherals. The Analytics Toolkit from our recently acquired wholly-owned subsidiary, SensiML Corporation, completes the end-to-end solution with accurate sensor algorithms using AI technology. The full range of platforms, software tools and eFPGA IP enables the practical and efficient adoption of AI, voice, and sensor processing across mobile, wearable, hearable, consumer, industrial, edge and endpoint IoT. For more information, visit [www.quicklogic.com](http://www.quicklogic.com) and <https://www.quicklogic.com/blog/>.

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