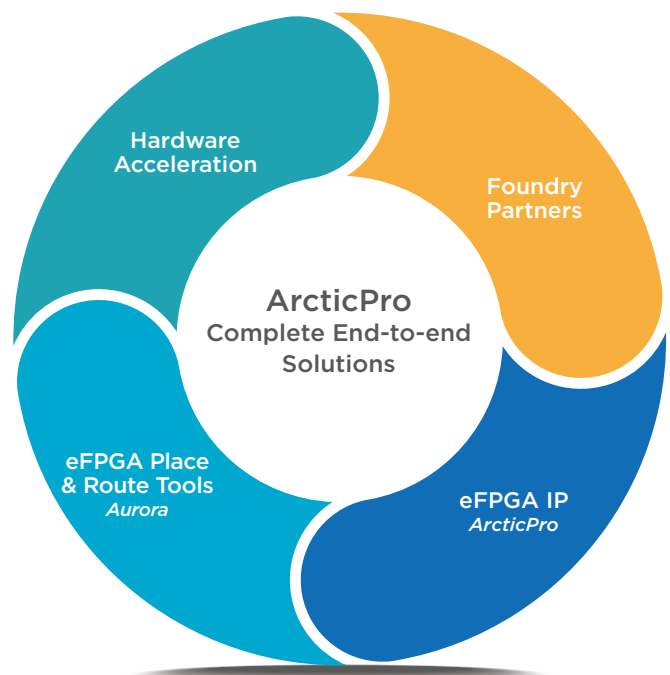QuickLogic

Democratizing IQ at the Edge and Beyond

Embedded FPGA (eFPGA) technology offers SoC designers and architects the ability to quickly and easily achieve post-production design flexibility in SoCs. Additionally, our eFPGA IP can increase overall system performance and decrease power consumption. QuickLogic delivers a complete solution including hard IP, Aurora™ EDA software, and hardware acceleration blocks.

## Build flexibility and differentiation for edge devices and beyond

With over 30 years of programmable logic device, software and IP experience, QuickLogic is the world's leading developer of low-cost, ultra-low power, high-performance embedded FPGA solutions. The company's ArcticPro™ eFPGA technology enables SoC designs to be customized post-production without expensive and time-consuming redesign — allowing them to easily address rapidly evolving market requirements, support emerging standards, and address multiple applications with a single mask set.

ArcticPro
Complete End-to-end
Solutions

- Hardware Acceleration
- Foundry Partners
- eFPGA IP *ArcticPro*
- eFPGA Place & Route Tools *Aurora*

ArcticPro™

eFPGA IP

- Proven LUT-based architecture with dense routing resources
- Configurable LUT array sizes in two dimensions for efficient topologies
- Provides efficient use of silicon through high logic utilization

LUT — FF
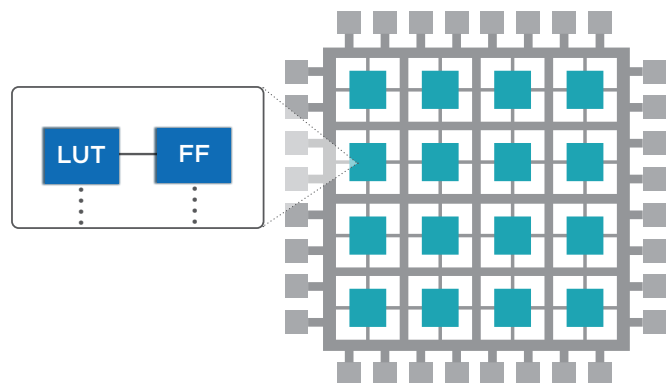
Hardware Acceleration

• When the eFPGA is integrated in an SoC, a key benefit is the ability to accelerate system performance or reduce system power consumption by offloading critical functions to the eFPGA

• QuickLogic also provides ASIC and FPGA-based function blocks that can be closely coupled to the eFPGA array for easy integration as well as an API for software developers

• Example of these are: FFTs, FIR Filters, etc.

eFPGA IP Deliverables

• **Customer-defined eFPGA array sizes**

• **QuickLogic provides all necessary files for SoC integration**

   (.cdl, .v, .lib, .lef and .gds)

Aurora eFPGA Design Tools

• **Robust Development Environment**

   – Over 300 engineer years of SW development results in highly efficient logic utilization, P&R and simulation

   – Extensive IP library and development board support

• **Aurora Place and Route Tools**

   – Standard FPGA design flow

   – Synthesis: Mentor Graphics Precision

   – Simulation: Compatible with industry standard EDA simulators (NC-Sim, VCS, Questa, ModelSim)

   – Dynamic FPGA size estimation and size configurator

   – Back annotated timing data for performance analysis

   – Power calculator

   – Standard TCL command line flow supported

The ArcticPro family of eFPGAs are available in 3 different architectures suitable for multiple applications and process nodes.

	Process	Foundry	Availability
ArcticPro	65nm & 40nm	Global Foundries, SMIC, TSMC	Now
ArcticPro 2	22nm FDX	Global Foundries	Now
ArcticPro 3	28nm FD-SOI	Samsung®	Q4 2019

For more information about QuickLogic, please visit **www.quicklogic.com**

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