

March 8, 2022



# QuickLogic Announces First Rad-Hard eFPGA IP for SkyWater RH90 Process

- "Fast Boot" eFPGA IP for custom rad-hard and rad-tolerant ASIC and standard products for aerospace, defense, and commercial applications
- Only U.S. Trusted foundry 90 nm rad-hard by process solution
- Supported by both open-source and QuickLogic-proprietary FPGA user tools

SAN JOSE, Calif. and BLOOMINGTON, Minn., March 8, 2022 /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 it has teamed with SkyWater Technology (NASDAQ: SKYT), a U.S.-based, DOD-accredited Trusted Foundry, to make a "fast boot" rad-hard eFPGA IP available to users of SkyWater's 90 nm rad-hard (RH90) process. This technology can be embedded as an IP core in ASIC and SoC devices or implemented as a custom rad-hard FPGA for mission critical and/or ruggedized applications. QuickLogic's eFPGA technology will be the first [rad-hard embedded FPGA IP](#) to be enabled for SkyWater's RH90 process.



Embedded FPGA IP provides a host of benefits to its users. Its reprogrammable technology enables post-manufacturing design flexibility, which allows single SoC or ASIC designs to serve multiple related applications – or easily adapt to changing standards or mission-specific requirements. It also supports customized implementations for intellectual property protection and offloading and hardware acceleration for artificial intelligence / machine learning applications. For defense and other long life cycle applications, eFPGA technology extends device lifetime by enabling customers' SoCs and ASICs to accommodate system-level changes without incurring the high costs of creating and qualifying a new device. Another key benefit for this eFPGA IP implementation is the "fast boot" feature. Typical discrete FPGAs and eFPGA IPs can require hundreds of milliseconds to load their intended configuration. Through QuickLogic's architecture innovations, this new eFPGA IP supports sub-100 microsecond boot times, independent of gate count, which is over 1000X better than traditional approaches.

Rad-hard applications depend on high-reliability devices that perform in the harshest environments, including exposure to high radiation levels. SkyWater's RH90 fully-depleted SOI process will meet the needs of strategic military, aerospace and commercial

applications for higher density, smaller physical size, and higher performance devices. Development of this advanced process was enabled by the previously announced investment in SkyWater's facility expansion and technology development made under the DOD's Trusted and Assured Microelectronics program.

This collaboration with QuickLogic expands a developing ecosystem that will enable a wide spectrum of advanced solutions for extreme environments. Moreover, customers producing rad-hard devices will benefit from SkyWater's decades of commercially focused manufacturing heritage for demanding end markets as well as from SkyWater's high quality standards for low and high-volume designs.

"Customers needing rad-hard eFPGA implementations will find a great solution in SkyWater's RH90 process," said Brian Faith, QuickLogic's CEO. "SkyWater offers the only onshore, Trusted, 90nm rad hard by process technology. The RH90 process supports increased density of circuits which improves speed and performance for digital applications."

"QuickLogic's eFPGA technology is a key element of our RH90 technology platform," said Steve Kosier, SkyWater's chief technology officer. "By embedding this IP, customers can gain nearly any level of post-manufacturing design flexibility for their ASIC and SoC devices while extending the applicability and longevity of their products. This is particularly valuable and important for strategic rad hard applications."

ASIC and SoC developers can benefit from QuickLogic's Australis eFPGA IP Generator, a tool that creates the eFPGA IP cores in a highly automated way, from definition to delivery of customized eFPGA IP. The tool is based on the OpenFPGA workflow and adds features specific to implementing QuickLogic's eFPGA IP solutions and provides the level of testing and support required for users to build devices capable of operating in the harshest of environments.

Designs implemented using QuickLogic's eFPGA technology are supported using the company's proprietary software development tools as well as the OpenFPGA open-source tool flow and a wide range of QuickLogic-provided and third-party sourced development kits.

### **Availability**

The QuickLogic eFPGA technology on SkyWater's RH90 process will be available for licensing through SkyWater's RH90 IP library or directly from QuickLogic. For more information about the eFPGA IP offering, visit [www.quicklogic.com/products/efpga/rad-hard-efpga-ip](http://www.quicklogic.com/products/efpga/rad-hard-efpga-ip) and for more information about SkyWater's RH90 process, visit: [www.skywatertechnology.com/technology/rad-hard-microelectronics/](http://www.skywatertechnology.com/technology/rad-hard-microelectronics/).

### **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>.

### **About SkyWater Technology**


SkyWater (NASDAQ: SKYT) is a U.S.-owned semiconductor manufacturer and a DOD-accredited Trusted supplier. SkyWater's Technology as a Service<sup>SM</sup> model streamlines the path to production for customers with development services, volume production and heterogeneous integration solutions in its world-class U.S. facilities. This pioneering model enables innovators to co-create the next wave of technology with diverse categories including mixed-signal CMOS, read-out ICs, rad-hard, power discretes, MEMS, superconducting ICs, photonics, carbon nanotubes and interposers. SkyWater serves growing markets including aerospace & defense, automotive, biomedical, cloud & computing, consumer, industrial and IoT. For more information, visit: [www.skywatertechnology.com](http://www.skywatertechnology.com).

### **SkyWater Technology Forward-Looking Statements**

This press release contains "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements that are based on the Company's current expectations or forecasts of future events, rather than past events and outcomes, and such statements are not guarantees of future performance. Forward-looking statements are subject to risks, uncertainties, and assumptions, which may cause the Company's actual results, performance or achievements to be materially different from those expressed or implied by such forward-looking statements. Key factors that could cause the Company's actual results to be different than expected or anticipated include, but are not limited to factors discussed in the "Risk Factors" section of the prospectus the Company filed with the SEC on April 22, 2021, its quarterly report on Form 10-Q for the quarter ended Oct. 3, 2021 and in other documents that the Company files with the SEC, which are available at <http://www.sec.gov>. The Company assumes no obligation to update any forward-looking statements, which speak only as of the date of this press release.

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