



NEWS ANNOUNCEMENT

FOR IMMEDIATE RELEASE

SkyWater Licenses Key FDSOI Technology from MIT Lincoln Laboratory, Moves Up Availability of its 90 nm Strategic Rad-Hard by Process Offering

MPW Shuttles for Early Access Partners to begin Q4 of 2020

BLOOMINGTON, MN, June 11, 2020 – [SkyWater Technology](#), the innovator's trusted foundry partner, announced it has licensed MIT Lincoln Laboratory's 90 nanometer (nm) fully depleted silicon-on-insulator (FDSOI) complementary metal-oxide-semiconductor (CMOS) process to produce radiation-hardened (rad-hard) electronics which can withstand harsh radiation environments. Radiation effects rapidly degrade microelectronics, and unmitigated, can cause compromised performance, malfunctions or complete failure. Lincoln Laboratory has developed this FDSOI process for making integrated circuits resistant to damage and malfunction caused by extreme radiation levels.

Transferring MIT Lincoln Laboratory's proven 90 nm FDSOI process into SkyWater's Trusted fab will enable accelerated delivery on a [previously announced up to \\$170 million Department of Defense \(DOD\)-funded program](#) at SkyWater to enhance microelectronics capabilities for the Department and develop a new 90 nm Strategic Rad-Hard by Process manufacturing flow. This investment was made under DOD's Trusted and Assured Microelectronics (T&AM) program which is developing enhanced sources of microelectronics for the Department's unique needs. The T&AM program seeks to collaborate with industry and key laboratory partners to provide sustainable, assured technology solutions for national security and defense.

"Our 90-nanometer FDSOI CMOS process has matured and scaled, and we are pleased to join with SkyWater to offer this capability for those who need integrated circuits that operate in extreme environments," said Dr. Pascale Gouker, a senior staff member at Lincoln Laboratory. "For many years, a large team has worked on this technology to be at this point where it will be offered by a commercially-focused foundry to address both government and non-defense related opportunities for rad-hard electronics."

Lincoln Laboratory began working on fully depleted silicon-on-insulator technology in the mid-1990s under DARPA sponsorship. In the ensuing years, variants of the Laboratory's FDSOI technology were optimized for operation under specialized conditions, such as radio frequency

range, extremely low power, and for cryogenic, high-temperature, and extreme radiation environments. This extreme-radiation capability is the basis of the current technology transfer to SkyWater.

“We are excited to accelerate our support of DOD objectives with the transfer of this proven FDSOI process from Lincoln Laboratory,” said Dr. Brad Ferguson, SkyWater Chief Technology Officer. “This effort will enable an unprecedented spectrum of Strategic Rad-Hard solutions for system designers while also extending a range of hardened capabilities for medical, commercial space and other extreme environment applications.”

SkyWater customers participating in its Early Access Partner Program will have the first opportunity to begin running test chips on MPW Shuttles ahead of final technology qualification. For customers currently in, or entering chip design phases, this is a significant opportunity to evaluate the increased circuit density and improved speed, power, and performance capabilities of this next generation technology.

In addition, SkyWater will offer this technology as part of a flexible platform offering called Rad-SoC™ which, bolstered by an ecosystem of partners, will enhance access to proven IP and streamline product development cycles, ultimately accelerating time to market. Moreover, manufacturing of these specialized ICs in SkyWater’s commercially-focused volume fab will provide high yield and production quality.

For more information about SkyWater’s Early Access Partner (EAP) Program, rad-hard manufacturing capabilities, or the developing Rad-SoC platform, please contact: swfoundry@skywatertechnology.com or sign up at www.skywatertechnology.com/rad-hard-eap.

About SkyWater Technology

SkyWater is the only U.S.-owned and U.S.-based pure play semiconductor foundry and is a DoD-accredited Trusted supplier, specializing in custom design and development services, design IP, and volume manufacturing for integrated circuits and micro devices. Through its Technology Foundry model, SkyWater’s world-class operations and unique processing capabilities enable mixed-signal CMOS, power, rad-hard and ROIC solutions. SkyWater’s Innovation Engineering Services empower development of superconducting and 3D ICs, along with carbon nanotube, photonic and MEMS devices. The company serves customers in growing markets such as aerospace & defense, automotive, biomedical, cloud & computing, consumer, industrial, and IoT. For more information, please visit: www.skywatertechnology.com/.

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