

Press Release

Attopsemi Expands its Proven I-fuse[®] OTP Portfolio on X-FAB's 180nm Platform

Tessenderlo, Belgium and Hsinchu, Taiwan – February 27, 2025

[X-FAB Silicon Foundries SE](#), the leading analog/mixed-signal and specialty foundry, and [Attopsemi Technology](#), the innovative one-time programmable (OTP) IP solutions provider, jointly announced today the successful demonstration of the latest version of Attopsemi's I-fuse S³[®] OTP on X-FAB's XH018 technology platform. This achievement gives X-FAB customers greater flexibility in choosing the optimal OTP solution for their designs.

Following a [previous announcement](#) of the demonstration and availability of the I-fuse S³[®] OTP based on 3.3V devices, this new design uses 1.8V devices – thus reducing the footprint by a factor of four compared to the existing version. Both versions are available in different memory densities, ranging from 8 bits to 8K x 8 bits (64K bits).

The I-fuse S³[®] OTP (whereby S³ means "super-small and scalable") is an innovation in peripheral design that complements the I-fuse[®] cell technology. By employing a novel array architecture, it achieves a compact form factor and scalability, closely following Moore's Law for small to medium-sized OTP applications. This innovation is incorporated into X-FAB's XH018, a powerful modular sensor and high-voltage EPI technology, supporting an extended temperature range from -40°C to 175°C. It features a modular 1.8V/3.3V ultra-low-noise process designed for automotive-grade, industrial, and medical applications.

"We are pleased with the performance of the XH018 platform" said Shine Chung, Chairman of Attopsemi. "The high reliability and high-temperature capability of this X-FAB process supports our unprecedented I-fuse[®] OTP performance. It is very encouraging to see that our collaboration has already triggered new projects with mutual customers in industrial

and consumer areas, and that it is starting to support new opportunities in the medical sector as well. With the IP proven functional up to 150°C, it also has the potential to enable additional opportunities in automotive applications.”

Nando Basile, Product Marketing Manager for Memory Solutions at X-FAB, added:

“Expanding Attopsemi’s I-fuse[®] IP on our XH018 technology gives our customers more options to integrate and embed proven third-party IP into their designs. This helps optimize time-to-market while maintaining a cost-effective approach with no mask adders to the X-FAB core process. These solutions are a perfect fit for our NVM portfolio, complementing our automotive-focused OTP and multi-programmable solutions like Flash and NVRAM. We’re seeing growing interest in these solutions, especially in industrial, IoT, and medical applications where a small form factor is of paramount importance.”

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Glossary

IoT – Internet of Things

IP – Intellectual Property

OTP – One-Time Programmable

NVM – Non-Volatile Memory

NVRAM – Non-Volatile Random Access Memory

About Attopsemi Technology

Attopsemi Technology is an OTP intellectual property (IP) provider located in Hsinchu, Taiwan. Since founded in 2010, the company has been dedicated to developing and licensing fuse-based OTP IP for all CMOS processes, including HKMG, FDSOI and FinFET technologies. Attopsemi provides the best possible OTP solutions for all merits in small size, low voltage/current programming/read, high quality, high reliability, low power, high speed, wide temperature and high data security. Attopsemi's proprietary I-fuse[®] OTP technologies have been proven in CMOS and other technologies from 0.6 µm to 12 nm in numerous advanced foundries, and has been adopted by many customers in automotive, IoT, and other application fields.

About X-FAB

X-FAB is a global foundry group providing a comprehensive set of specialty technologies and design IP to enable its customers to develop world-leading semiconductor products that are manufactured at X-FAB's six wafer fabs located in Malaysia, Germany, France, and the United States. With its expertise in analog/mixed-signal technologies, microsystems/MEMS and silicon carbide (SiC), X-FAB is the development and manufacturing partner for its customers, primarily serving the automotive, industrial and medical end markets. X-FAB has approximately 4,500 employees and has been listed on Euronext Paris since April 2017 (XFAB). For more information, please visit www.xfab.com.

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