

Press Release

LIGEN TEC and X-FAB collaboration creates Europe's largest capacity foundry service for integrated photonic circuits

Strategic partnership will address rapidly growing demand across a broad range of industry sectors

Tessenderlo, Belgium and Lausanne, Switzerland – September 14, 2021

LIGEN TEC, pioneer in high-performance, low-loss, silicon nitride photonic solutions, and specialty semiconductor producer X-FAB Silicon Foundries have announced a strategic partnership resulting in the large-scale supply of integrated photonic devices.

Photonic integrated circuits (PICs) are set to repeat the success story of electronic integrated circuits (ICs). Working with light instead of electrons, PICs will play a key role in tomorrow's infrastructure for communication, biosensing and transportation.

"Silicon nitride offers superior performance to manage the light in the chip circuitry, with unprecedented low propagation losses and high-power handling," states Michael Zervas, co-founder of LIGEN TEC. "While there is growing worldwide demand for silicon nitride PICs, the missing piece is a commercial volume foundry that can keep pace with the expected uptake."

LIGEN TEC has implemented its proprietary, patented, low-loss silicon nitride process technology within X-FAB's existing high-throughput foundry workflow. It means that LIGEN TEC PICs are now commercially available in high volumes out of Europe, a key requisite enabling the secure and independent supply of the quantities foreseen in relation to sensors for self-driving cars, environment monitoring, quantum computers and an array of other applications.

"This partnership allows us to offer the benefits of our technology to high volume customers," says LIGEN TEC's Director Thomas Hessler. "X-FAB's advanced equipment and superior process control will enable us to serve the mass market with elevated performance PICs. Its multiple sites and capacity to deal with 100,000 new 200 mm wafer starts per month gives exceptional supply

assurance and almost limitless scope for scaling. The proven track record X-FAB has in the automotive and medical sectors will open up new opportunities for LIGENTEC.”

“The integrated photonics market has huge potential. We have partnered with LIGENTEC because it has the highest performance and the most mature offering for passive PICs. This is complemented by a great customer orientation and strong development pipeline, rooted in the company’s long-term R&D relationship with EPFL in Lausanne. We are highly committed to exploring the future possibilities of PICs through our partnership with LIGENTEC, acting as a pillar of strong growth for X-FAB’s specialty foundry business,” adds Rudi De Winter, CEO of X-FAB.

Thanks to this strategic partnership with X-FAB, LIGENTEC now takes volume production requests for low-loss silicon nitride PICs, based on 200 mm wafers. For enquiries, please contact [info\(at\)ligentec.com](mailto:info(at)ligentec.com).

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About X-FAB

X-FAB is the leading analog/mixed-signal and MEMS foundry group manufacturing silicon wafers for automotive, industrial, consumer, medical and other applications. Its customers worldwide benefit from the highest quality standards, manufacturing excellence, and innovative solutions by using X-FAB’s modular CMOS and SOI processes in geometries ranging from 1.0 μm to 130 nm, and its special silicon carbide and MEMS long-lifetime processes. X-FAB’s analog-digital integrated circuits (mixed-signal ICs), sensors, and micro-electro-mechanical systems (MEMS) are manufactured at six production facilities in Germany, France, Malaysia and the U.S. X-FAB employs approx. 4,000 people worldwide. www.xfab.com

About LIGENTEC

LIGENTEC supplies application specific Photonic Integrated Circuits (PICs) to customers in high-tech markets such as Quantum Computing, Communication, LiDAR, New Space and Biosensors. LIGENTEC’s proprietary, patented and fully CMOS compatible semiconductor fabrication technology, originally developed at EPFL Lausanne, provides PICs at lower cost and better performance than today’s state of the art. It essentially combines the benefits of known, low loss material such as glass with the benefits of silicon photonics and addresses with its low loss, low cost and short production cycle the main challenges of integrated photonics today. LIGENTEC is based in Lausanne, Switzerland. www.ligentec.com



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Acronyms

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| EPFL | École Polytechnique Fédérale de Lausanne |
| IC | Integrated Circuit |
| PIC | Photonic Integrated Circuit |