



Press Release

## Licensing agreement between X-FAB and IHP Leibniz Institute leads to innovative 130 nm SiGe BiCMOS platform

Tessenderlo, Belgium and Frankfurt/Oder, Germany – September 12, 2022

X-FAB Silicon Foundries, the leading analog/mixed-signal and specialty foundry, has announced a further expansion of its longstanding partnership with the Leibniz Institute for High Performance Microelectronics (IHP). As part of a new agreement, X-FAB will now license IHP's cutting-edge SiGe technology. It will mean the performance benefits of this technology can be brought to high-volume customers.

Significantly strengthening the X-FAB technology portfolio, the newly created 130 nm platform provides a unique solution attaining the elevated performance parameters needed to address next generation communication requirements. Examples of areas benefiting from this technology include Wi-Fi 6 (and future Wi-Fi 7) access points, plus next generation cellular infrastructure (in particular 5G mmW and emerging 6G standards) and vehicle-to-vehicle (V2V) communication. This technology will also be pivotal in the development of +100 GHz radar systems, for use in both automotive and consumer applications

This license agreement follows on from the collaborative work that began in 2021, where X-FAB's copper backend was added to IHP's SG13S and SG13G2 frontend technologies to boost the bandwidth figures that could be supported. In relation to this innovative SiGe platform, X-FAB is set to start engaging with selected early adopters on prototyping projects during Q4 2022. An early-access PDK is available enabling Prototyping, while volume manufacturing will happen at X-FAB France, the company's facility near Paris.

According to Prof. Gerhard Kahmen, Scientific Director at IHP: "The incorporation of IHP's HBTs into X-FAB's RF platform will provide customers with a truly differentiated SiGe BiCMOS technology that is certain to bring tangible performance benefits. The technology transfer between our two



organizations is a perfect example of how industry and research institutions can work together to achieve outstanding results.”

“X-FAB and IHP have a successful track record of combining our respective resources to develop advanced semiconductor solutions, and this latest SiGe announcement takes that on to a whole new exciting phase,” states Dr. Greg U’Ren, RF Technology Director at X-FAB. “This is the starting point for us to make further SiGe BiCMOS related innovations that will contribute to defining the communications sector in the years ahead, covering industrial automation, consumer and automotive use cases.”

###

## 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  $\mu\text{m}$  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 about 4,000 people worldwide. [www.xfab.com](http://www.xfab.com)

## About IHP

IHP is a Leibniz Association institute and Europe’s leading research center for silicon-based systems and ultrahigh frequency circuits and technologies including new materials. The institute develops innovative solutions for application areas such as wireless and broadband communication, security, medical technology, Industry 4.0, automotive industry and aerospace. IHP has an advanced process infrastructure, including 1500 m<sup>2</sup> DIN EN ISO 14644-1 cleanroom, which is used to manufacture qualified Si-based RF technologies and systems for mmWave, THz and photonics applications. Technology module extensions are quickly brought to a reliable and applicable level through the in-house Design Kit developments. The flagship technology is the world’s fastest, stabilized and qualified 130 nm SiGe BiCMOS process line (SG13G2 and the newest SG13G3 with next generation high performance SiGe HBT). IHP employs about 360 people. [www.ihp-microelectronics.com](http://www.ihp-microelectronics.com)



<p><b>X-FAB Press Contact</b></p> <p>Anja Noack MarCom Manager / Public Relations X-FAB Silicon Foundries +49-361-427-6162 <a href="mailto:anja.noack@xfab.com">anja.noack@xfab.com</a></p>	<p><b>IHP Press Contact</b></p> <p>Dr. René Scholz Team Leader Research &amp; Prototyping Service IHP +49-335-562-5647 <a href="mailto:scholz@ihp-microelectronics.com">scholz@ihp-microelectronics.com</a></p>
---	---

### Acronyms

BiCMOS	Bipolar Complementary Metal Oxide Semiconductor
HBT	Heterojunction Bipolar Transistor
mmW	Millimeter Wave
PDK	Process Design Kit
RF	Radio Frequency
SiGe	Silicon Germanium