



Press Release

X-FAB Adopts Cadence EMX Solver's Electromagnetic Simulation Technology to Support Innovative RF Designs Targeted at Communication and Automotive Markets

Tessenderlo, Belgium – May 24, 2022

X-FAB Silicon Foundries SE, the leading analog/mixed-signal and specialty foundry, today announced a collaboration with the prominent computational software vendor, Cadence Design Systems, Inc., in relation to electromagnetic (EM) simulation. As a result, the [Cadence® EMX® Planar 3D Solver](#) is now successfully integrated into the X-FAB RFIC workflow, thereby benefitting [X-FAB's current and future RF platforms](#). The validation activities carried out via the EMX Solver on X-FAB RF reference designs for low-noise amplifiers, RF switches, filters and passives elements all delivered high-accuracy results within very short timeframes.

By leveraging Cadence's EMX Solver, X-FAB design engineers can efficiently develop next-generation RF technology for the latest communication standards (including sub-6GHz 5G, mmWave, UWB, etc.), which are enabling technologies for electric vehicle (EV) wireless applications.

Seamlessly incorporated within the Cadence Virtuoso® RF solution, the intuitive EMX Solver quickly provides foundry models to a high degree of accuracy. These help to streamline product development processes and enable the most stringent design specifications to be met. Access to this ultra-fast EM simulator means that X-FAB customers will be able to get their design projects completed earlier, allowing them to gain significant time-to-market advantages.



As part of its 130 nm RF SOI PDK, X-FAB now plans to supply reference designs that have been characterized using the EMX Solver. These will be distributed to customers in both the communication and automotive sectors. Furthermore, the PDK will include a wide array of inductor models which have all been pre-characterized by the EMX Solver.

According to Dr. Greg U'Ren, RF technology director at X-FAB: "Time-efficient and accurate electromagnetic modeling is pivotal for minimizing the number of design iterations associated with RF/mmWave-based projects. Keeping time to market as short as possible is of prime importance, and our clients can now benefit from the Cadence EMX Planar 3D Solver's capabilities with regard to our RF technologies."

"X-FAB is Europe's largest pure-play semiconductor foundry and has been very focused on technologies targeting automotive applications," said Ben Gu, VP R&D of Multiphysics Systems Analysis at Cadence. "For Cadence, the automotive market is a key priority, and we're committed to serving our customers with IC design and analysis workflows that enable innovation and shorten time to market. The EMX Solver's electromagnetic analysis delivers fast and accurate EM models, and through them, customers are empowered to address the most demanding design specifications for automotive-grade quality and safety."

###

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 about 4,000 people worldwide. Learn more at xfab.com.



About Cadence

Cadence is a pivotal leader in electronic systems design, building upon more than 30 years of computational software expertise. The company applies its underlying Intelligent System Design strategy to deliver software, hardware and IP that turn design concepts into reality. Cadence customers are the world's most innovative companies, delivering extraordinary electronic products from chips to boards to complete systems for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial and healthcare. For eight years in a row, Fortune magazine has named Cadence one of the 100 Best Companies to Work For. Learn more at [cadence.com](https://www.cadence.com).

X-FAB Press Contact

Thomas Hartung
VP Sales & Corporate Marketing
X-FAB Silicon Foundries
+49-361-427-6160
thomas.hartung@xfab.com

Cadence Press Contact

Cadence Newsroom

Cadence
+1 408-944-7039
newsroom@cadence.com

Acronyms

EDA	Electronic Design Automation
PDK	Process Design Kit
RF	Radio Frequency
SOI	Silicon on Insulator
UWB	Ultra-Wideband