

## Press release

### **European research project iRel40: Improving the reliability of electronic components for future applications**

Munich – 2 February 2021 – The Europe-wide research initiative Intelligent Reliability 4.0 (iRel40) aims to improve the reliability of electronic systems and microelectronic components. Coordinated by Infineon Technologies AG, 75 science and industry partners from 13 countries are pooling their forces to achieve this goal.

“Enhancing electronics performance through miniaturization and integrating more and more functions is progressing steadily. Performance and complexity are increasing, as the costs per function go down,” says Dr. Reinhard Ploss, CEO of Infineon Technologies AG. “Powerful electronics form the basis for forward-looking technologies such as electro-mobility, autonomous driving, renewable energies and energy-efficient connected solutions. However, they will only be successful if users can depend on reliable functionality, quality and lifetime. Reliability is a key differentiating factor in international competition.”

iRel40 adopts a holistic approach to optimizing the reliability of microelectronic systems along the entire value chain – from the wafer to the chip and the packaging and finally to the system and hence the actual application. The aim is to significantly reduce failure rates and thus improve product quality and lifetime. This approach also contributes to more sustainable management of our natural resources.

Experts from science and industry in Europe are working together to achieve this. They are relying on the latest insights and methods in material research and failure analysis, including modeling and simulation, as well as artificial intelligence. The project is divided into eight work packages that deal with aspects such as requirements, theoretical principles, materials, test methods,

and pilot applications. Infineon will, in particular, contribute its expertise and skills in chip and packaging technology.

### **Pilot examples defined for new applications and optimizing factories**

The developed methods and processes for improving reliability are to be verified in sixteen actual use cases from the fields of energy, transport and industry, as well as a further eighteen factory pilots. “We have got off to a very good start on working on the project. We have already defined requirements and specifications for checking the results of our work,” says project manager Dr. Klaus Pressel from Infineon. “Our goal is to improve production processes in microelectronics with the aid of optical methods and sensors, in order to lower the failure rate in production, improve quality, and finally achieve maximum reliability for new products.”

### **Strengthening Europe as a business location**

The collaborative project should secure around 25,000 highly qualified jobs across Europe through strong partnerships and investments in innovation. The European Union is funding iRel40 within the scope of the ECSEL (Electronic Components and Systems for European Leadership) program. Funding from Germany will be provided by the Federal Ministry of Education and Research and from the two states of Saxony and Thuringia. An overview of all the funding bodies can be found on the project website. The project will run for three years and is scheduled to end in April 2023.

More information on the project and the project partners is provided on the website <https://www.irel40.eu/>

## About Infineon

Infineon Technologies AG is a world leader in semiconductor solutions that make life easier, safer and greener. Microelectronics from Infineon are the key to a better future. In the 2020 fiscal year (ending September 30), the company reported revenue of more than 8.5 billion euros with a workforce of 46,700 people worldwide. Following the acquisition of the US company Cypress Semiconductor Corporation in April 2020, Infineon is now a global top 10 semiconductor company.

Infineon is listed on the Frankfurt Stock Exchange (ticker symbol: IFX) and in the USA on the over-the-counter market OTCQX International Premier (ticker symbol: IFNNY). Further information is available at [www.infineon.com](http://www.infineon.com)

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