

## PRESS RELEASE

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### **Faultless data transfer despite interference – digitally tunable radio frequency filters at embedded world**

**Erlangen/Nuremberg, Germany: With the available frequencies increasingly used up, the communication industry faces some big challenges: Demand is growing for wireless communication systems that work faultlessly even when coexistence and interference problems arise. The Fraunhofer Institute for Integrated Circuits IIS has developed digitally tunable radio frequency filters (RF filters) that provide dynamic access to a variety of frequencies without any delay. Fraunhofer IIS will be presenting its RF filters at embedded world 2018.**

Wireless communication systems are used wherever wired solutions are impractical or when full flexibility is a must. Applications in areas such as satellite communication, public safety and mobile communication employ wireless communication as a matter of course. Wireless technologies are, however, also fast becoming a staple of industry as a way of increasing process connectivity and flexibility.

Whatever the application and context, the devices that send and receive data must function reliably. But with coexistence and interference issues on the rise, we can expect significant constraints and problems when it comes to transferring data. Fraunhofer IIS has developed digitally tunable radio frequency bandpass filters that make it possible to reliably select the required frequency spectrum while simultaneously rejecting out-of-band signals.

Digital adjustability and the option of reconfiguring filters during operation enable dynamic access to a variety of frequencies without delay. This provides a quick and easy way of making country- and application-specific adjustments. Compared to conventional filter banks that comprise multiple filters, the solderable RF filters are a space-saving solution, each one measuring just 14 x 15 mm.

#### **RF filters at embedded world**

To learn more about the advantages of using the various types of bandpass filters available for frequencies from 220 to 1400 MHz, visit the Fraunhofer IIS booth at embedded world (Hall 4, Booth 4-460) in Nuremberg from February 27 to March 1, 2018.

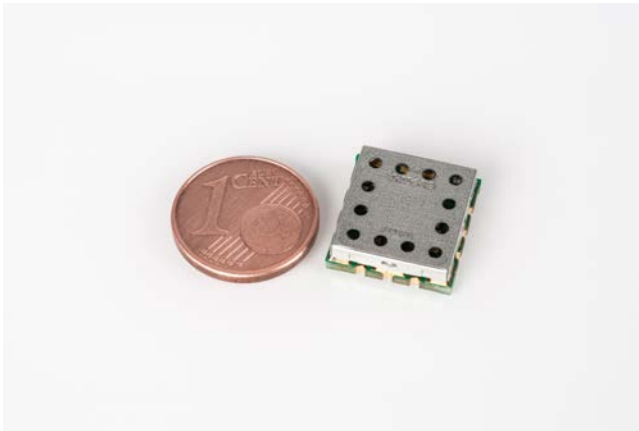
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**Miniaturized design – solderable, digitally tunable RF bandpass filters.**

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The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 69 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of 24,500, who work with an annual research budget totaling more than 2.1 billion euros.

**The Fraunhofer Institute for Integrated Circuits IIS** in Erlangen is one of the world's leading application-oriented research institutions for microelectronic and IT system solutions and services. It is the largest of all Fraunhofer Institutes. Research at Fraunhofer IIS revolves around two guiding topics:

In the area of "**Audio and Media Technologies**", the institute has been shaping the digitalization of media for more than 30 years now. Fraunhofer IIS was instrumental in the development of mp3 and AAC and played a significant role in the digitalization of the cinema. Current developments are opening up whole new sound worlds and are being used in virtual reality, automotive sound systems, mobile telephony, streaming and broadcasting.

In the context of "**cognitive sensor technologies**", the institute researches technologies for sensor technology, data transmission technology, data analysis methods and the exploitation of data as part of data-driven services and their accompanying business models. This adds a cognitive component to the function of the conventional "smart" sensor.

More than 900 employees conduct contract research for industry, the service sector and public authorities. Founded in 1985, Fraunhofer IIS now has 13 locations in 10 cities: Erlangen (headquarters), Nürnberg, Fürth and Dresden, as well as Bamberg, Weischedel, Coburg, Würzburg, Ilmenau and Deggendorf. The budget of 150 million euros a year is mainly financed by contract research projects; 24 percent of the budget is subsidized by federal and state funds.

For more information visit [www.iis.fraunhofer.de](http://www.iis.fraunhofer.de)