

FRAUNHOFER HEINRICH HERTZ INSTITUTE

# PRESS RELEASE

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## Fraunhofer HHI at FOE, April 5-7, 2017, Tokyo

**At this year's Photonics West Fraunhofer Heinrich Hertz Institute HHI presents its latest developments in Photonic Components, Systems and Networks.**

You find the following highlights at Fraunhofer booth 30-36, Hall 1:

### **Terahertz sensing – Industrial grade THz-System for non-destructive testing (NDT)**

Terahertz radiation has great potential as versatile tool for non-destructive testing. Up to now, the application of THz technologies in industrial environments is severely impeded due to the complexity of today's THz sensor heads. Especially reflection measurements suffer from bulky and expensive devices.



Fraunhofer HHI presents a novel, compact THz-transceiver module, which enables measurements under normal incidence. This significantly facilitates the use of THz technologies for industrial applications.

### **PolyBoard Foundry Services – The Integration Platform for Your Ideas**

The PolyBoard integration platform allows for rapid prototyping, short iteration cycles and low upfront development effort. The technology allows the integration of on-chip free space elements, 3D structures, graphene electro-absorption modulators, as well as other optical functionalities such as switches, variable optical attenuators, tunable lasers, and flexible high frequency and optical interconnects. Come to the Fraunhofer booth to learn about the services including simulation, CAD, technology development, device manufacturing, characterization, and qualification.



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### Hybrid Optical Wireless/60GHz Link

The robust, hybrid LED Link with parallel 60 GHz transmission is well suited for mobile backhauling with low latency and high availability. The technology is also suitable for wireless point-to-point communication in industrial environments.

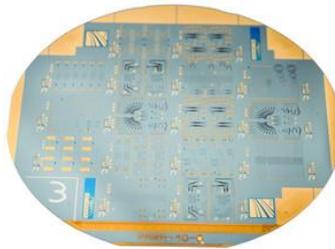


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### InP Foundry Services – Photonic Integration Toolbox

Fraunhofer HHI enables self-configuration of InP-Based Photonic-Integrated Circuit (PIC) containing passive- and active devices on one substrate with a quick turn-around time of 3 months. Choose from a range of proven building blocks, such as 40 GHz receivers, 20 GHz DMLs and EAMs, and 1 dB/cm passive waveguides. Low-cost multi-project wafer-run-based PICs are already commercially available through Jeppix and customer-specific private runs can be realized on demand. Dedicated design and layout software is provided, and several packaging partners are available.



### High-Speed Real-Time Digital Signal Processing Platform

The highly flexible FPGA-based development and demonstration platform is suitable for signal processing algorithms and real-time data transmission. The platform includes 65GSa/s DACs, 56GSa/s ADCs, 100GbE-class optical interfaces and Virtex Ultrascale/Ultrascale+ FPGA processing capabilities in a robust, 19"-housing.



Innovations for the digital society of the future are the focus of research and development work at the **Fraunhofer Heinrich Hertz Institute HHI**. In this area, Fraunhofer HHI is a world leader in the development for mobile and optical communication networks and systems as well as processing and coding of video signals. Together with international partners from research and industry, Fraunhofer HHI works in the whole spectrum of digital infrastructure – from fundamental research to the development of prototypes and solutions. [www.hhi.fraunhofer.de](http://www.hhi.fraunhofer.de)

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The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 69 Fraunhofer Institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of some 24,500, who work with an annual research budget totaling 2.1 billion euros. Of this sum, 1.9 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.

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