

Press release, November 26, 2018

5G broadband expansion First Sensor develops an innovative transmission module

When the Advisory Council of the German Federal Network Agency decides on the award conditions and auction rules for the 5G frequency auction today, the foundation will be laid for the mobile gigabit Internet of the future. To guarantee the transmission of large data quantities, First Sensor AG is working on an innovative poly-transceiver together with the internationally active telecommunications equipment supplier ADVA Optical Networking SE and further development partners. This poly-transceiver will form the basis for the 5G broadband expansion. The transceiver is based on ultra-small polymer-chip technology. It will facilitate the data connection of the cellphone masts to the fiber-optic network with transmission rates of up to ten gigabits per second. First Sensor is developing polyboard technologies, optical interfaces, a cooling system and a housing for the sensor module, and is set to take over production following series maturity from 2020 onwards.

“Not only does the new transmission module developed for ADVA meet an important prerequisite for an extensive 5G launch starting in 2020, it is also a key factor in making visions of Industry 4.0, E-Health or autonomous driving a reality,” explains Dr. Dirk Rothweiler, CEO of First Sensor AG. “This is because current data transmission is too energy-intensive, too slow and has not been designed for the necessary data quantity. Raising this considerably is an issue to be tackled in the future, not just for telecommunications but also for sensors.”

The sensor specialist has succeeded in combining electronic and optical functions for the poly-transceiver. Not only does this increase the module's performance capability, it also generates clear cost advantages compared with current manufacturing procedures. “Ultimately, there are almost no other alternatives, not just in terms of technology but also in terms of price. This gives not just our customer but also us ourselves access to a volume market”, continues Rothweiler. First Sensor expects an annual turnover worth millions following a successful market launch. Besides the microelectronic packaging, the photonic packaging is an integral element in its strategic development roadmap. With the proof-of-concept, First Sensor now has its eyes firmly set on further sensor applications for this innovative polymer-chip technology.

The company has been working on the innovative poly transceiver since 2016; it received the Thüringer innovation prize for the ADVA on November 14. The Fraunhofer Heinrich-Hertz-Institute as well as Laserzentrum Hannover e. V. are involved in this development. The module is the result of a subproject of the growth core “PolyPhotonics Berlin”, the BMBF innovation initiative “Entrepreneurial Regions” in which eleven companies as well as three research facilities in the Region Berlin-Brandenburg region have come together to implement applications in the field of telecommunication and data communication as well as sensors and analytics.

About First Sensor AG

First Sensor is one of the world's leading suppliers in the field of sensor systems. Our company develops and produces standard products and customer-specific solutions for applications in the industrial, medical, and mobility growth markets. With over 900 employees, we are represented at six locations in Germany, and also operate sales and production sites in the US, Canada, China, UK, France, Denmark, Sweden and the Netherlands as well as a global network of partners. First Sensor AG has been listed in the Prime Standard segment on the Frankfurt Stock Exchange since 1999. For more information please visit www.first-sensor.com.

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