



News Release

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Infineon Technologies Japan K.K.

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Sharp announces 5G Smartphone with world facing Infineon REAL3™ 3D Image Sensor for 8K video bokeh and photo effects

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With the recent popularity of social networking services, it has become common to shoot everyday photos and video and post them on the internet. One technique for efficiently and beautifully capturing images and video, and for making the subject stand out, is the so-called background bokeh-effect. The Infineon Technologies REAL3™ 3D imaging sensor makes it possible to apply this bokeh-effect in real time on a smartphone, something which has been too computing-intensive to do in the past. 3D depth sensors fill a critical role in applications that rely on precise 3D image data. The REAL3™ 3D sensor — is a joint development between Infineon Technologies AG and pmdtechnologies ag, a company with leading-edge specialization in software and 3D time-of-flight (ToF) systems technology. The sensor technology is used in Sharp's AQUOS R5G smart phone, which goes on sale in Japan in spring, 2020.

Features of the REAL3™ 3D Image Sensor

Highly integrated for various integration: The Infineon 3D single-chip solution is highly integrated and therefore enables smallest ToF camera modules. It can be integrated into small smartphone handsets and can be used for multiple applications such as face authentication, Virtual Reality/Augmented Reality, and many more. Infineon and pmdtechnologies jointly developed this 3D imager as well as the corresponding algorithm to get a high precision 3D point cloud, which is necessary for such applications.

Uses a precise new measurement method: Previous 3D measurement technology used complex algorithms to compute the distance from the camera to the target object. The REAL3™ 3D Image Sensor is measuring the distance by capturing 940 nm infrared light reflected from the user or scanned objects and uses high-level data processing to achieve precise depth measurements. The needed compute power in the system is much lower, which enables use cases like video bokeh-effect that have not been applicable before.

Resistant to sunlight, low power consumption: Patented SBI (suppression of background illumination) technology provides a wide dynamic range of measurement across any lighting situation, from bright sunlight to dimly lit rooms.

Sharp executive officer Yoshiro Nakano had this to say: “Integrating Infineon's 3D image sensor in our smartphone allows for acquiring new information. We expect that applications making the most of distance and shape recognition will increase and generate a range of new user experiences.”

“We’re very proud about the collaboration with Sharp on a smartphone going on sale in Japan that uses the Infineon REAL3™ 3D Image sensor,” said Andreas Urschitz, Infineon Power Management & Multimarket (PMM) division president. “We want to continue providing solid, highly reliable, energy efficient, and tiny chips to contribute to a wide range of applications. The 3D sensor has great chances for success, and we greatly hope that consumers will enjoy the beautiful new video camera effect it enables.”

The REAL3™ Image Sensor was developed in Graz, Austria, Dresden, and Siegen, Germany. For more information about Infineon’s 3D Image Sensor family products and usage, please see www.infineon.com/real3.

About Infineon

Infineon Technologies is a world leader in semiconductor fields that enable innovations in making life more comfortable, safe, and environmentally friendly. We believe it is our calling to build semiconductors that are the key to opening the door to a bright future. In the 2019 fiscal year (ending 30 September), the Company reported sales of €8.0 billion with around 41.400 employees worldwide. Infineon is listed on Germany’s Frankfurt stock exchange (ticker symbol: IFX), and on the U.S. OTCQX over-the-counter marketplace (ticker symbol: IFNNY).

About pmdtechnologies ag

Pmdtechnologies ag is a fabless IC company, with sites in Siegen, Dresden, and Ulm, Germany, and subsidiaries in the United States, China, and Korea. It provides digital imaging technology based on 3D Time-of-Flight CMOS technology. The company was established in 2002, and has over 350 international patents regarding photonic mixer device (PMD) based applications, PMD measurement methods, and concrete applications of these. The company’s 3D sensors are used in markets such as industrial automation, automotive, and a wide range of consumer applications, such as mobile phones. For more information, please see pmdtec.com.