Market News

New i-ToF imager enables smallest 3D camera systems with improved quantum efficiency at optimized cost

Munich, Germany – 24 February, 2023 – Infineon Technologies AG (FSE: IFX / OTCQX: IFNNY), in collaboration with 3D time-of-flight specialist and premium partner pmdtechnologies, introduces the IRS2976C Time of Flight (ToF) VGA sensor, a performance-enhancing evolution of the IRS2877C ToF VGA sensor and novel member of the REAL3™ product family.

The implementation of Infineon's advanced pixel technology enables the pixels to achieve a quantum efficiency of 30 percent and more, a level so far only attained by back-side illumination (BSI) sensors. Remarkably, this is accomplished while maintaining the superior cost advantage of front-side illumination (FSI) sensors. As a result, the IRS2976C sensor is the first ToF imager in the world to pass Googles Class 3 (Strong) certification for face ID, while seamlessly operating under the mobile device’s display.

The IRS2976C imager supports a number of long-range, low-power use cases that enable a measurement range of 10 meter and further. As with all members of the REAL3™ family, pmdtechnologies' patented Suppression of Background Illumination (SBI) technology is integrated into each pixel. This provides the robust data in high dynamic range (HDR) and sunlight scenes.

“Our unique ToF CMOS process ensures excellent sensitivity and robust operation in indoor and outdoor environments,” said Christian Herzum, Vice President 3D-sensing at Infineon. “In addition, our IRS2976C 3D ToF imager offers a high level of functionality and maximum flexibility to optimize 3D camera designs. The sensor is ideal for applications like secure authentication for smartphones, payment terminals, smart door locks and also for virtual and augmented reality (AR/VR) headsets, service robots, and various IoT devices.”

The IRS2976C offers system VGA resolution of 640 x 480 depth points. With the world's smallest form factor of 23 mm², the imager sensor is drop-in compatible to

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previous IRS2877C imager and allows an easy upgrade path. The high level of integration enables a reduced bill of material (BOM), lowest form factors and simplified design. In combination with IRS9102C, Infineon's latest VCSEL driver, the new IRS2976C allows the design of the smallest 3D camera systems at optimized costs.

Availability

Engineering samples of the IRS2976C imager are available. The new product will be presented at Mobile World Congress 2023 in Barcelona, Spain. More information is available at www.infineon.com/real3

Infineon at Mobile World Congress 2023

Mobile World Congress 2023 will be held in Barcelona, Spain, from February 27 to March 2, 2023. Under the motto "Driving decarbonization and digitalization. Together.", Infineon will demonstrate in Hall 5a, Booth #51 and virtually how the latest semiconductor innovations are transforming smart homes, smart factories and wireless infrastructures. Information about the MWC show highlights is available at www.infineon.com/mwc.

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