Press Release

PMDTechnologies ramps 3D CMOS imager for mass market usage

PMD PhotonICs® 19k-S3 imager available on demand: High quality 3D image perception for everyone

January 10, 2012 – Las Vegas, USA – PMDTechnologies announces at Consumer Electronics Show 2012 in Las Vegas that the companies 160x120 pixel 3D CMOS imager is ready for mass market usage. The PMD PhotonICs® 19k-S3 is the first commercially available 3D-ToF (Time-of-Flight) chip for camera developers and system integrators. Using the most mature 3D-ToF CMOS technology available worldwide, as it is used for the manufacturing of PMD products since 2005, the PMD PhotonICs® 19k-S in its 3rd generation gives customers a high quality level to start their unique application development and thus paves the way to new and innovative 3D perception based end products.

The 19k-S3 imager enables real-time capturing of distance and gray scale information. Due to the sensitivity and improved performance of the new PMD PhotonICs ® 19k-S3, high accuracy with extremely low power consumption is achievable. Read-out clocks of 15MPixel/s are possible. Thanks to the integrated SBI (Suppression of Background Illumination) technology, a well known PMD feature, this innovative product can be deployed in indoor and outdoor environments. The resistance to motion blur allows detecting fast moving objects. A Region-of-Interest (ROI) function enables a flexible and application specific lateral resolution. The 160x120 pixel resolution is optimized for close range human-machine interaction up to 2 meters.

The PMD PhotonICs ® 19k-S3 can be used for various use cases like Human Machine Interfaces (HMIs) for notebooks, tablets, mobiles and automotive applications, games and consumer electronics, automotive environmental perception, factory automation and mobile robotics, digital signage, security, surveillance and medical technology.

The PMD[vision]® CamBoard nano with dimensions of 37x30x25mm is the smallest depth sensor reference design available worldwide. Using just one infrared LED as an active illumination source and being USB powered, the CamBoard nano is a perfect starter kit to explore PMD technology for near range applications where the limitation of the installation space is obvious. However, the use cases can easily be extended by varying camera parameters such as optics, illumination power, frame rate, or modulation frequency among others.

Providing a frame rate of up to 90fps at full resolution of 160x120 pixel with a 90° Field-of-View, the CamBoard nano is suitable for HMIs based on gesture detection. It delivers depth maps and gray value image data simultaneously. Therefore, it is possible to analyze scenes based on 3D data only or in combination with 2D gray value information. This reference design equips our customers with an operational platform which facilitates the development of application-specific depth sensor systems, enabling them to reduce innovation cycles. To support use-case evaluations we offer our API

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PMDSDK2 for Linux and Windows (32bit/64bit) along with the latest generation of our visualization tool LightVis and our MATLAB for Windows interface PMDMDK supporting customers to turn their ideas into reality. The ready-to-use software package also enables the exploration of multi-camera use cases.

"We are convinced that the availability of the 19k-S and the CamBoard nano reference design will initiate a 3D-ToF community, enabling applications, demos and product solutions we all don't think of so far", says Dr. Bernd Buxbaum, CEO of PMDTechnologies. "The opportunities and use cases are endless as the PMD technology is very scalable in terms of size, performance and cost."

"Natural touchless user interfaces based on depth sensing require a vision of the user experience and the right tools", adds Jochen Penne, Director Business Development at PMDTechnologies. "We are happy to provide the sensor tools to let the visions of next-generation user interfaces become alive."

About PMDTechnologies GmbH

PMDTechnologies, a fabless IC company, is the worldwide leading 3D ToF CMOS-based digital imaging supplier. Founded in 2002 as a spin-off from the Center for Sensor Systems at the University of Siegen, PMDTec owns about 40 patents worldwide concerning PMD-based applications, the PMD principle and its realization. By 2010, the company had sold some 100,000 PMD sensors in various markets and applications. About 60 high skilled engineers are employed by the German based corporation working mainly on the chip design, quality assurance and in the area of pre-series and product development. For more information, please visit www.PMDTec.com.

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