PixArt Announced its Research Result of the Array Photoplethysmogram Sensor

PixArt Imaging Inc. is a leading supplier of Human Machine Interface solutions. Its latest research result “A New Look at the Essence of the Array Photoplethysmograph” was first published in the 9th ICBET (International Conference on Biomedical Engineering and Technology) Conference held at Meiji University of Japan.

With the transmittance of green light through human skin, Photoplethysmogram (PPG) is a methodology to sense the variation of light absorption caused by blood volume change. The method can be deployed to derive heart rate data as well as emotional and stress indexes for users’ reference, and therefore has been widely used in sports, fitness and health management as a trendsetter in wearable applications. However, with previous products and related services restricted to single-point measurement, the application scenarios achievable by PPG technology was substantially limited.

By virtue of PixArt’s core CMOS sensor technology, we have conquered the limitation of single-point measurement to achieve array-type output that has significantly extended the application for PPG technology. As shown in the research, in contrast to previous models that requires the utilization of biochemical reaction or Doppler process to obtain microcirculation mechanism through heated skin surface, it is now feasible to obtain the same accurate result via the Array PPG sensors. Since PPG technology has natural advantages of small form factor, lower cost and ease of access, it is open to endless potential if applied to skin microcirculation, endothelial cell analysis or diabetes care in the future.

As addressed by Sen-Huang Huang, the General Manager of PixArt, PixArt sees this research result as an overture to providing convenient, lightweight and multi-functional healthcare applications to our aging society that values personal health management. This PPG research may act as a catalyst to help establishing a platform that encourages the sharing of innovative ideas and communication regarding the latest technologies. PixArt is looking forward to having the participation from both the academic field and the related industries to collect meaningful healthcare parameters, in order to explore and create the most value out of this PPG research.

PixArt Imaging Inc. is a professional IC Design company that has focused on the development of its core sensing technology for many years, and provides customers with a variety of human-machine-interface solutions. Founded in 1998, PixArt is headquartered in Taiwan's Hsinchu Science and Industrial Park with various regional branches across the globe, including the United States, Japan and Malaysia. Aiming to deliver comprehensive human-machine-interaction experiences, PixArt has so far accumulated rich experience in mixed-mode signal image processing and system development. PixArt is able to lead the high-end sensor application market owing to its strong research and development capabilities and extensive product portfolio, including CMOS imaging sensing IC, capacitive IC and healthcare IC.

For more information about PixArt's Array PPG sensor, please contact us through the following phone number (+886-3-579-5317), email (sales@pixart.com) or browse our website at http://www.pixart.com

Published on 28th of May, 2019 at the News Media Center of PixArt Website