



Samsung Addresses a Growing Mobile Health Market with Industry's First Smart Bio-Processor

Seoul, Korea December, 2015 – Samsung Electronics, a world leader in advanced semiconductor technology, announced that it is addressing the growing trend of quantified health with an all-in-one advanced system logic chip for the health-oriented wearables market, the Bio-Processor. The Samsung Bio-Processor, now in mass production, is specifically designed to allow accelerated development of innovative wearable products for consumers who are increasingly monitoring their health and fitness on a daily basis.

“With improvements in smart, fitness devices and an increase in consumer health consciousness, more and more people are looking for ways to monitor various personal bio-data, or fitness data, to constantly manage their health” said Ben K. Hur, Vice President of marketing, System LSI business at Samsung Electronics. “Samsung’s Bio-Processor, which can process five different biometric signals, is the most versatile health and fitness monitoring chip available on the market today and is expected to open up many new health-based service options for our customers.”

Samsung Bio-Processor: Small in size; Big on Versatility

Samsung’s Bio-Processor is the industry’s first all-in-one health solution chip. By integrating not only Analog Front Ends (AFE), but also microcontroller unit (MCU), power management integrated circuit (PMIC), digital signal processor (DSP), and eFlash memory, it is able to process the bio-signals it measures without the need of external processing parts. Even with its integrated design, the Bio-Processor is particularly innovative thanks to its incredibly small size. When compared to the total area of the discrete parts, the Bio-Processor is only about one fourth of the total combined size, which is ideal for small wearable devices, offering a bounty of options when designing new devices.

While heart rate monitoring alone may have been compelling in the past, the ability to measure a variety of fitness data is expected in today’s wearable products. To meet such demands, Samsung has designed its Bio-Processor to integrate five AFEs including bioelectrical impedance analysis (BIA), photoplethysmogram (PPG), electrocardiogram (ECG), skin temperature, and galvanic skin response (GSR) into a single chip solution that measures body fat, and skeletal muscle mass, heart rate, heart rhythm, skin temperature and stress level, respectively. In addition, combinations of these fitness inputs can be considered for a variety of new use cases.

To speed product development and better understand Samsung’s new Bio-Processor, several wearable reference platforms are now available to demonstrate various use cases. For example, wrist band, board and p



atch type reference devices exhibit the Bio-Processor's potential by demonstrating its ability to measure multiple fitness variables on an extremely small device.

Samsung Bio-Processor is currently in mass production and will be available in fitness/health devices within the first half of 2016.

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