

A Multiparameter Biosignal Sensor for Mobile Health Service

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In this study, a multiparameter biosignal sensor was proposed for the use of smartphones in a mobile health (m-Health) service application. The proposed sensor for the experiments consisted of one set of two small devices; the size of each sensor was $25 \times 20 \times 4 \text{ mm}^3$. This sensor was made of either copper or titanium to achieve better body affinity and electric conductivity. The manufactured sensor was able to measure major bioparameters including the electrocardiogram (ECG) signal of a channel, temperature, photoplethysmography (PPG), and body fat. Furthermore, an independent analog hardware was manufactured to measure each bioparameter. Our results showed that bioparameters were easily measured and they will be effectively applied to smartphones.

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