

Oscillometric blood pressure measurement algorithm for microcontroller

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Abstract

Blood pressure measurements are used for clinical studies of certain illnesses, blood hypertension classification and monitoring the condition of patients during operations. There are a number of blood pressure measurement devices available on the market, oscillometric devices can be easily used under home circumstances. The goal of our oscillometric blood pressure measurement device is to measure the blood pressure periodically during a 24 hour interval, store the records and transmit them to an application running on a PC, which makes other processing on the records. We implemented an oscillometric blood pressure measurement algorithm into a microcontroller environment, which has limited amount of memory and computing capacity. In our presentation we introduce the implementation of the main steps of the algorithm with their difficulties.

Keywords: automated blood pressure measurement, microcontroller, biometrical signal processing