

DESIGN OF 8CHANNEL PORTABLE ECG CAPTURING SYSTEM USING ARM7 PROCESSOR

CHANDRASHEKHAR V. GHULE AND D. G. WAKDE

Abstract

Accuracy of ECG signal analysis also depends on capturing mechanism. Since this is very important aspect related to human being, continuous research is going on in this field. This paper describes a complete system starting from analog section to its interfacing to the ARM processor. In this paper, portable system developed is capable of capturing 8 Lead ECG data simultaneously. This 8 lead data can converted into 12 lead signal using relationship amongst the data of various leads. ARM LPC2103 processor has been used due to its various modern features. Analog card consists of LPF, HPF, Notch Filter, Amplifier, Level Shifting, Input High Voltage Protection, etc. This gives proper signal to the ARM processor. The signal is then sent through serial port for further analysis.

Keywords: ARM Processor, ECG Analog Card, Defibrillator protection, SMD.