

# Portable ECG

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## Abstract

This thesis looks into the development of a portable device for electrocardiography which can measure three elemental ECG leads, is battery powered and transmits measured data into a central data collection unit via WiFi. The patient is therefore able to move and the physician can see real time information about his/her condition.

The core of the system is an ECG analog frontend – ADAS1000 from Analog Devices. The data are processed by a STM32L0 MCU and sent to the data collection unit using the ESP8266 WiFi module. The main output of this thesis is a complete prototype design which contains both the hardware and the software. It is very simple to manufacture a PCB from the presented data and thanks to the enclosed source codes of the MCU firmware and the central unit software (which can be run on any Linux PC) it is possible to quick start the usage of the prototype.

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