

## **ABSTRAK**

Dengan memanfaatkan layanan SMS untuk mengirim suhu tubuh adalah suatu hal baru yang efisien karena selain penggunaan mudah juga harga yang murah, maka oleh karena itu dirancanglah suatu rangkaian yang dapat memantau suhu tubuh dengan handphone dan layanan SMS.

Rangkaian dibuat dengan cara menggunakan LM35 sebagai sensor suhu kemudian data analog dari LM35 diubah menjadi sinyal digital dengan menggunakan ADC0809. Mikrokontroler AT89C51 memproses data yang diterima dari ADC0809 dan dikirimkan ke handphone pengirim dalam format SMS agar bisa diterima oleh handphone penerima.

Alat berjalan dengan baik, dengan persen kesalahan sebesar 2,03% tapi cukup berpengaruh karena dalam hal mengukur suhu tubuh manusia diperlukan ketepatan suhu yang tinggi, maka dari pada itu diperlukan suatu penguat dan komparator untuk menambah akurasi dari alat.

## **ABSTRACT**

By using the shortmessage service to send the body temperature information is a new efficient way because it's easy to use and also cheap in price. Therefore I designed a network which is able to monitor the human body temperature by handphone and SMS.

This network is made by using LM35 as the temperature censor, then the analogous data from LM35 turned into digital signal by using ADC0809. The AT89C51 microcontroller process the data accepted from ADC0809 and delivered to the receiver's handphone in shortmessage service (SMS) format.

This appliance works good, with small gratuity of error equal to 2,03% but it's big enough to have an effect because in the case of measuring temperature of human body we need a high accuracy, hence we need an amplifier and comperator to increase the device's accuration.

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## DAFTAR SINGKATAN

|       |   |
|-------|---|
| SMS   | Short Message Service                       |
| CPU   | Central Processing Unit                     |
| I/O   | Input/Output                                |
| RAM   | Random Access Memory                        |
| ROM   | Read Only Memory                            |
| CPU   | Central Processing Unit                     |
| SCM   | Single Chip Microcomputer                   |
| EPROM | Erasable Programmable ROM                   |
| CU    | Control Unit                                |
| ALU   | Arithmetic Logic Unit                       |
| UART  | Universal Asynchronous Receiver Transmitter |
| GND   | ground                                      |
| PSEN  | Program Store Enable                        |
| ALE   | Address Latch Enable                        |
| EA    | External Access Enable                      |
| DPTR  | Data Pointer Register                       |
| SFR   | Special Function Register                   |
| PSW   | Program Status Word                         |
| ADC   | Analog to Digital Converter                 |
| EOC   | endofconversion                             |
| SMSC  | SMS Center                                  |
| PDU   | Protocol Data Unit                          |
| SCA   | Service Center Address                      |
| MR    | Message Reference                           |
| DA    | Destination Address                         |
| PID   | Protocol Identifier                         |
| DCS   | Data Coding Scheme                          |
| VP    | Validity Period                             |
| UDL   | User Data Length                            |



|      |                           |
|------|---------------------------|
| UD   | User Data                 |
| SCA  | Service Center Address    |
| OA   | Originator Address        |
| DCS  | Data Coding Scheme        |
| SCTS | Service Center Time Stamp |

## DAFTAR LAMPIRAN

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