

INTISARI

Sistem monitoring jumlah penumpang bus berbasis mikrokontroler AT89S51 adalah sistem untuk memberi informasi dengan memonitoring dari jarak jauh antara pemilik kendaraan dengan busnya. Mode *monitoring* menggunakan kabel dengan informasi yang dikirim dan diterima mengenai kapasitas penumpang pada bus.

Alat ini terbagi atas dua bagian yaitu *monitoring* pada bus dan *monitoring* pada pol. *Monitoring* pada bus terdiri atas 3 bagian yaitu piranti masukan dari sensor, sebuah piranti pemroses mikrokontroler AT89S51 dan piranti keluarannya berupa tampilan *seven segment* dua digit sedangkan *monitoring* pada pol terdiri atas sebuah piranti pemroses mikrokontroler AT89S51 dan piranti keluaran berupa tampilan *seven segment* empat digit. Pada saat alat dijalankan, setiap ada penumpang yang naik maka data di bus dan data di pol akan bertambah satu. Sedangkan jika ada penumpang yang turun maka data di bus akan berkurang satu tetapi data jumlah penumpang yang ada di pol tidak berubah.

Data maksimum dalam bus 60 penumpang dan data maksimum untuk sistem *monitoring* di pol 9.999 penumpang dalam satu hari yang akan ditampilkan di *seven segment*.

Kata kunci : *Monitoring*, Tampilan *Seven Segment*, Aplikasi Mikrokontroler AT89S51

Abstract

The Monitoring System on the number of bus passengers based on AT89S51 Microcontroller is a system to provide information about the number of passengers through remote monitoring between the bus owner and his bus. The monitoring mode is by using cables with information which is sent and which is received about the passenger capacity of the bus.

This device is divided in two parts, i.e. monitoring device on the bus and monitoring device at the pool. The monitoring device on the bus consists of three parts; they are: input software of sensor, a processor software of AT89S51 Microcontroller and output software in the seven segment two digit display; while the monitoring device at the pool consists of the one processor software AT89S51 Microcontroller and the output is in the form of seven segment four digit display. When the device is being operated, whenever there is one passenger who is getting on board (on the bus) then the data in the bus and in the pool is added by one. On the other hand, a different case will happen that when one passenger is getting off the bus then data in the bus will be reduced by one, but the data about the number of passenger in the pool does not change.

The maximum data in a bus with 60 passengers and the maximum data for passengers monitoring system in the pool 9.999 passengers in one day will be displayed in the seven segment .

Key Words: Monitoring, Seven Segment Display, AT89S51 Microcontroller Application