



"Embedding thoughts into Technology"

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ARM based High Speed DAS

Client:

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Requirement:

To design and develop a data acquisition system which records data at pre-defined intervals from different sensors. The sensors will provide varying voltages and currents which have to be conditioned before digitization. The processed readings were to be stored in a text file on PC with time and date stamp. The data transfer to PC has to be through Ethernet.

Solution:

The system is based on 8 bit microcontroller P89v51RD2 and external 12 bit ADC (MCP3202) was used. The signals from the sensors are conditioned by the on-board signal conditioning circuit. A 16x2 LCD screen allows the user to view the current readings with date and time. In order to transfer the data to PC for logging, the UDP protocol was used and data was transferred after every 1 second. The system had the provision of setting the IP address of both host and destination.

Tools/Platforms:

- » P89v51RD2
- » MCP3202(ADC)
- » Keil IDE V3.31
- » ETM121 Development board with Ethernet