

Microprocessor and microcontroller lab

This lab familiarizes the students with Assembly Language Programming /Embedded C of 8051 microcontrollers. It imparts the skills for interfacing microcontrollers with the help of Assembly Language Programming /Embedded C programming. The lab is well equipped with microcontroller trainer and interfacing kits from Dynalog India Limited. The lab is well equipped with Easy 8051 V6 development system kits from Mikroelektronika which is a fully contained board suitable for programming 8051 controllers from Atmel as well as for designing and testing 8051 project.

Using 8051 kits, students learn ,

- Basic arithmetic operations -Addition / subtraction / multiplication / division of 8/16 bit data.,
- Data transfer/exchange between specified memory locations.
- Largest/smallest from a series,
- Sorting (Ascending/Descending) of data.
- Sum of a series of 8 bit data.
- Multiplication by shift and add method.
- Code conversion – Hex to Decimal/ASCII to Decimal and vice versa.
- Interfacing of 8255 study cards , LCD interface, Thermocouple, Serial communication.
- ADC interface, DAC interface with waveform generation.
- Display (LED/Seven segments/LCD) and keyboard interface,
- Traffic light controllers ,stepper motor control with microcontrollers,
- Mini Project.

