

MICRO CONTROLLER 8051 FAMILY

This Workshop is a practical approach targeted to improve the student's Knowledge in Microcontroller and Embedded C to develop code on the family of 8051 Based Micro-Controllers. This workshop will be a firm stepping stone for implementing any kind of embedded projects.

The objective of this workshop is to provide adequate information about the 8051 family Micro-controllers so that the learner will be able to initiate designing and develop prototypes of projects quickly on a 8-Bit controller platform.

DESCRIPTION

A structured course with a smooth flow of information to gain expertise and therefore to gain appreciation on the following aspects:

- Internal Architecture of 8051 micro controller, pin description and internal operations in detail
- Advanced programming methods, monitoring and control of the peripherals
 - o GPIOs,
 - o ADCs and DACs
 - o DC Motors, Stepper Motors,
 - o Temperature Sensors,
 - o LCDs,
 - o Keypad Decoding,
 - o UART, Timers, Counters, Interrupts Etc.

This module also deals with the connections that are to be made on the PCBs to develop the project prototype kit by the student him/her self.

PLAT FORM

8-Bit 8051 MICRO CONTROLLER FAMILY Coding on Keil uVision4 targeting NXP's 89V51RD2 Controller with ISP.

DURATION:

2-4 Days (8 Hrs Per Day)

DELIVERY METHOD

Instructor driven, Programming in Embedded-C, Hands-On assignments on the controller kit.

COURSE TOPICS

Introduction to Embedded Systems, Microprocessors Vs Micro controllers, Programming with internal peripherals, Interfacing and programming external peripherals – LEDs, switches, ADC/DAC, LCD, Keypad, Motors, Sensors etc.; interrupts handling and other efficient programming techniques

MATERIAL FOR THE PARTICIPANTS

1. Micro-controller Starter Kit
2. CD containing all the slides, Programming Software, UART Terminal Controlling Apsis Proprietary executable and plenty of code examples.
3. Participation Certificates

