

8051 Embedded System Guide

Includes 8051 architecture breakdown, timer use, UART setup, and practical LED/PWM control examples. Features 5 complete Keil projects.

1. 8051 Architecture Overview

Detailed explanation of the ALU, registers, memory organization, and SFRs.

2. Timer and Counter Tutorial

Setting up timers for time delays and event counting.

3. UART Setup and Serial Communication

How to configure 8051 for serial communication using Keil.

4. LED Blinking Project

Step-by-step project controlling an LED using timers.

5. PWM Signal Generation

Using timers to generate PWM for motor control or dimming.