

---

# 8051

## Microcontrollers

### Hardware Software

### And Applications

---

Programming and Customizing the 8051  
Microcontroller

Microprocessors and Microcontrollers

Microcontroller Projects in C for the 8051

Microprocessors & Introduction to Microcontroller  
Microcontrollers

Digital System Design - Use of Microcontroller

Embedded Systems Design with 8051  
Microcontrollers

Microcontrollers

Embedded Software Development with C

Programming and Interfacing the 8051  
Microcontroller

Embedded Microcontroller Interfacing

Embedded Hardware: Know It All

The 8051 Microcontroller

Microcontroller 8051

C and the 8051: Building efficient applications

Programming and Customizing the PIC  
Microcontroller

8051/8052 Microcontroller

8051 Microcontroller

MICROPROCESSORS AND MICROCONTROLLERS  
The 8051 Family of Microcontrollers  
Embedded Systems Design with 8051  
Microcontrollers  
8051 Microcontrollers  
PIC Microcontroller  
Exploring C for Microcontrollers  
The 8051 Microcontroller  
The 8051/8052 Microcontroller  
Embedded Controller Forth For The 8051 Family  
8051 Microcontroller  
8051 Microcontrollers  
Handbook of Microcontrollers  
Embedded Systems Design with 8051  
Microcontrollers  
Introducing Microcontrollers  
Patterns for Time-triggered Embedded Systems  
Microprocessor and Microcontroller Fundamentals  
PIC Microcontroller  
The 8051 Microcontroller  
The 8051 Microcontroller and Embedded  
Systems: Using Assembly and C  
Microprocessors & Microcontrollers  
8051 Microcontroller  
C and the 8051: Hardware, modular  
programming, and multitasking

8051  
Microcontroller  
Hardware  
Applications  
Downloaded from  
matthewharrington.com  
by guest

---

**SWANSON**

---

Programming  
and  
Customizing

the 8051  
Microcontrolle  
r Pearson  
Education  
India

A presentation of developments in microcontroller technology, providing lucid instructions on its many and varied applications. It focuses on the popular eight-bit microcontroller, the 8051, and the 83C552. The text outlines a systematic methodology for small-scale, control-dominated embedded systems, and is accompanied by a disk of all the example problems included in the

book.  
**Microprocessors and Microcontrollers** McGraw Hill Professional Mixed-Signal Embedded Microcontrollers are commonly used in integrating analog components needed to control non-digital electronic systems. They are used in automatically controlled devices and products, such as automobile engine control systems, wireless remote controllers,

office machines, home appliances, power tools, and toys. Microcontrollers make it economical to digitally control even more devices and processes by reducing the size and cost, compared to a design that uses a separate microprocessor, memory, and input/output devices. In many undergraduate and post-graduate courses, teaching of mixed-signal

microcontrollers and their use for project work has become compulsory. Students face a lot of difficulties when they have to interface a microcontroller with the electronics they deal with. This book addresses some issues of interfacing the microcontrollers and describes some project implementations with the Silicon Lab C8051F020 mixed-signal microcontroller. The

intended readers are college and university students specializing in electronics, computer systems engineering, electrical and electronics engineering; researchers involved with electronics based systems, practitioners, technicians and in general anybody interested in microcontrollers based projects. *Microcontroller Projects in C for the 8051* Cengage Learning The second edition

presents the hardware and software of the 8051 microcontroller. The authors emphasize interfacing to real-world devices such as switches, displays, and motors. In this revised edition, two new chapters on C programming have been added, making the book more beneficial to readers.

**Microprocessors & Introduction to Microcontroller Technical Publications**  
The book is

<p>written for an undergraduate course on the 8085 and 8086 microprocessors and 8051 microcontroller. It provides comprehensive coverage of the hardware and software aspects of 8085 and 8086 microprocessors and 8051 microcontroller. The book uses plain and lucid language to explain each topic. A large number of programming examples is the feature of this book. The book provides the logical</p>	<p>method of describing the various complicated concepts and stepwise techniques for easy understanding, making the subject more interesting. The book is divided into three parts. The first part focuses on the 8085 microprocessor. It teaches you the 8085 architecture, pin description, bus organization, instruction set, addressing modes, instruction formats,</p>	<p>Assembly Language Programming (ALP), instruction timing diagrams, interrupts and interfacing 8085 with support chips, memory and peripheral ICs - 8251, 8253, 8255, 8259 and 8279. It also explains the interfacing of 8085 with data converters - ADC and DAC- and introduces a temperature control system design. The second part focuses on the 8086 microprocessor. It teaches</p>
--	---	---

you the 8086 architecture, register organization, memory segmentation, interrupts, addressing modes, operating modes - minimum and maximum modes, interfacing 8086 with support chips, minimum and maximum mode 8086 systems and timings. The third part focuses on the 8051 microcontroller. It teaches you the 8051 architecture, pin description, instruction

set, programming 8051 and interfacing 8051 with external memory. It explains timers/counters, serial port, interrupts of 8051 and their programming. It also describes the interfacing 8051 with keyboards, LCDs and LEDs and explains the control of servomotor, stepper motors and washing machine using 8051.

**Microcontrollers Technical Publications**  
This book was

written with the novice or intermediate 8052 developer in mind. Assuming no prior knowledge of the 8052, it takes the reader step-by-step through the architecture including discussions and explanations of concepts such as internal RAM, external RAM, Special Function Registers (SFRs), addressing modes, timers, serial I/O, and interrupts.

This is followed by an in-depth section on assembly language which explains each instruction in the 8052 instruction set as well as related concepts such as assembly language syntax, expressions, assembly language directives, and how to implement 16-bit mathematical functions. The book continues with a thorough explanation of the 8052 hardware

itself, reviewing the function of each pin on the microcontroller and follows this with the design and explanation of a fully functional single board computer- every section of the schematic design is explained in detail to provide the reader with a full understanding of how everything is connected, and why. The book closes with a section on hardware interfacing

and software examples in which the reader will learn about the SBCMON monitor program for use on the single board computer, interfacing with a 4x4 keypad, communicating with a 16x2 LCD in direct-connect as well as memory-mapped fashion, utilizing an external serial EEPROM via the SPI protocol, and using the I2C communication standard to access an external real

time clock. The book takes the reader with absolutely no knowledge of the 8052 and provides him with the information necessary to understand the architecture, design and build a functioning circuit based on the 8052, and write software to operate the 8052 in assembly language. *Digital System Design - Use of Microcontroller* Addison-Wesley Longman

Unlike traditional embedded systems references, this book skips routine things to focus on programming microcontrollers, specifically MCS-51 family in 'C' using Keil IDE. The book presents seventeen case studies plus many basic programs organized around on-chip resources. This "learn-through-doing" approach appeals to busy designers. Mastering

basic modules and working hands-on with the projects gives readers the basic building blocks for most 8051 programs. Whether you are a student using MCS-51 microcontrollers for project work or an embedded systems programmer, this book will kick-start your practical understanding of the most popular microcontroller, bridging the gap between microcontroller hardware experts and C programmers.



*Embedded Systems Design with 8051 Microcontrollers* Technical Publications  
The 8051 architecture developed by Intel has proved to be the most popular and enduring type of microcontroller, available from many manufacturers and widely used for industrial applications and embedded systems as well as being a versatile and economical option for design

prototyping, educational use and other project work. In this book the authors introduce the fundamentals and capabilities of the 8051, then put them to use through practical exercises and project work. The result is a highly practical learning experience that will help a wide range of engineers and students to get through the steepest part of the learning curve and become proficient and productive

designing with the 8051. The text is also supported by practical examples, summaries and knowledge-check questions. The latest developments in the 8051 family are also covered in this book, with chapters covering flash memory devices and 16-bit microcontrollers. Dave Calcutt, Fred Cowan and Hassan Parchizadeh are all experienced authors and lecturers at

the University of Portsmouth, UK. Increase design productivity quickly with 8051 family microcontrollers Unlock the potential of the latest 8051 technology: flash memory devices and 16-bit chips Self-paced learning for electronic designers, technicians and students *Microcontrollers* New York ; Montreal : McGraw-Hill Primarily intended for diploma, undergraduate and

postgraduate students of electronics, electrical, mechanical, information technology and computer engineering, this book offers an introduction to microprocessors and microcontrollers. The book is designed to explain basic concepts underlying programmable devices and their interfacing. It provides complete knowledge of the Intel's 8085 and 8086 microprocessors and 8051

microcontroller, their architecture, programming and concepts of interfacing of memory, IO devices and programmable chips. The text has been organized in such a manner that a student can understand and get well-acquainted with the subject, independent of other reference books and Internet sources. It is of greater use even for the AMIE and IETE students—those who do not have the

facility of classroom teaching and laboratory practice. The book presents an integrated treatment of the hardware and software aspects of the 8085 and 8086 microprocessors and 8051 microcontroller. Elaborated programming, solved examples on typical interfacing problems, and a useful set of exercise problems in each chapter serve as distinguishing features of the book.

**Embedded**

**Software Development with C**

Newnes  
The purpose of this book is to present the technology required to develop hardware and software for embedded controller systems at a fraction of the cost of traditional methods. Included in the book are hardware schematics of 8051 family development systems (single board and bussed 8051 microcontroller). Source code for both

the 8086 and 805 family FORTH operating systems is published in the book. Binary images of the operating systems can be generated from the source code using the metacompiler also contained in the book. The book can be seen as a "toolbox" including all the necessary hardware and software information to be used in constructing 8051-based controller systems.

**Programmin**

## g and Interfacing the 8051 Microcontrolle

er Universal-Publishers  
The book is written for an undergraduate course on the 8051 and MSP430 microcontrollers. It provides comprehensive coverage of the hardware and software aspects of 8051 and MSP430 microcontrollers. The book is divided into two parts. The first part focuses on 8051 microcontroller. It teaches you the 8051 architecture,

instruction set, programming 8051 and interfacing 8051 with external memory. It explains timers/counters, serial port, interrupts of 8051 and their programming. It also describes the interfacing 8051 with data converters - ADC and DAC, keyboards, LCDs, LEDs, stepper motors and DC motor interfacing. The second part focuses on MSP430 microcontroller. It teaches

you the low power features, architecture, instruction set, programming, digital I/O and on-chip peripherals of MSP430. It describes how to use code composer studio for assembly and C programming. It also describes the interfacing MSP430 with external memory, LCDs, LED modules, wired and wireless sensor networks. *Embedded Microcontrolle*

<p><i>r Interfacing</i>                  Pearson                  Education                  India                  This textbook                  describes in                  detail the                  fundamental                  information                  about the                  8051                  microcontrolle                  r and it                  carefully                  teaches                  readers how                  to use the                  microcontrolle                  r to make both                  electronics                  hardware and                  software. In                  addition to                  discussion of                  the 8051                  internals, this                  text includes                  numerous,                  solved                  examples,                  end-of-chapter                  exercises,</p>	<p>laboratory and                  practical                  projects.  <u>Embedded</u>  <u>Hardware:</u>  <u>Know It All</u>                  Technical                  Publications                  Microcontrolle                  r 8051                  provides the                  reader an                  indepth                  understanding                  of                  microcontrolle                  r 8051 in                  terms of the                  necessary                  theory and its                  practical                  usage and                  presents the                  hardware and                  software                  features of the                  microcontrolle                  r 8051 in a                  lucid manner.                  The                  conceptual                  difficulties</p>	<p>that exist in                  understanding                  the subject                  have been                  overcome with                  simple                  illustrations                  that help the                  reader grasp                  the subject                  effectively.                  The assembly                  language                  programming                  have been                  dealt at length                  with a large                  number of                  examples and                  worked out                  problems.                  Interfacing of                  microcontrolle                  r 8051 with                  the devices                  like LCD/LED,                  Keyboard,                  Sensor, ADC                  and DAC etc.,                  are explained                  in a reader                  friendly</p>
--	--	--

approach. A large number of worked out examples provided in each chapter are helpful to the reader in mastering the programming and application aspects of microcontroller 8051.

#### The 8051

#### Microcontroller

CRC Press

Well known in this discipline to be the most concise yet adequate treatment of the subject matter, it provides just enough detail in a direct exposition of the 8051 microcontroller

's internal hardware components. This book provides an introduction to microcontrollers, a hardware summary, and an instruction set summary. It covers timer operation, serial port operation, interrupt operation, assembly language programming, 8051 C programming, program structure and design, and tools and techniques for program development. For microprocessor

programmers, electronic engineering specialist, computer scientists, or electrical engineers.

#### *Microcontroller 8051*

Prentice Hall  
Gain valuable assembly code

programming knowledge with the help of this newly revised book. Readers will be trained on programming the Intel 8051 microcontroller, one of the most common microprocessors used in controls or instrumentation applications that use

assembly code. The third edition teaches current principles of computer architecture including simulation and programming, with new state-of-the-art integrated development software that is included at the back of the book. The writing style engages readers and renders even complex topics easy to absorb. Practical examples of assembly code instructions illustrate how

these instructions function. Complex hardware and software application examples are also provided. *C and the 8051: Building efficient applications* Springer Science & Business Media "A presentation of developments in microcontroller technology, providing lucid instructions on its many and varied applications. It focuses on the popular eight-bit

microcontroller, the 8051, and the 83C552. The text outlines a systematic methodology for small-scale, control-dominated embedded systems, and is accompanied by a disk of all the example problems included in the book."-- Provided by publisher. **Programming and Customizing the PIC Microcontroller** Addison Wesley Publishing Company The book focuses on

8051 microcontrollers and prepares the students for system development using the 8051 as well as 68HC11, 80x96 and lately popular ARM family microcontrollers. A key feature is the clear explanation of the use of RTOS, software building blocks, interrupt handling mechanism, timers, IDE and interfacing circuits. Apart from the general architecture of the microcontrollers, it also covers programming, interfacing and system design aspects.

*8051/8052 Microcontroller* Prentice Hall CD-ROM contains: Source code in 'C' for patterns and examples -- Evaluation version of the industry-standard Keil 'C' compiler and hardware simulator.

**8051 Microcontroller** Pearson

In almost every branch of life the electronic equipment used by modern man incorporates microcontrollers in some form. Intended for university students in electronic engineering, software design or mechatronics, this text leads the reader from first principles of these fascinating devices to advanced applications and techniques. The 8051 chip is used for illustration throughout, and the concepts are



widely applicable to the whole embedded systems field. Each chapter comes with a wealth of illustrative examples and assignment questions for lecture-room use.

MICROPROCESSORS AND MICROCONTROLLERS

Academic Press

This book presents a thorough introduction to the Microchip PIC® microcontroller family, including all of the PIC programming and

interfacing for all the peripheral functions. A step-by-step approach to PIC assembly language programming is presented, with tutorials that demonstrate how to use such inherent development tools such as the Integrated Development Environment MPLAB, PIC18 C compiler, the ICD2 in-circuit debugger, and several demo boards. Comprehensive coverage spans the topics of interrupts,

timer functions, parallel I/O ports, various serial communications such as USART, SPI, I2C, CAN, A/D converters, and external memory expansion.

**The 8051 Family of Microcontrollers** Cengage Learning

Today, everything from cell phones to microwaves to CD players all contain microcontrollers, or miniature computers, which need to be programmed

to perform specific tasks. Designing such systems requires an understanding of both microprocessor electronics	and programming languages. This book is written for the industrial electronics engineer who needs to use	or switch to the Intel 8051 family of microcontrollers and implement it using a C programming language.
--	--	---

Best Sellers - Books :

- [It Ends With Us: A Novel \(1\)](#)
- [House Of Flame And Shadow \(crescent City, 3\)](#)
- [A Court Of Thorns And Roses \(a Court Of Thorns And Roses, 1\)](#)
- [The Collector: A Novel](#)
- [Twisted Love \(twisted, 1\) By Ana Huang](#)
- [Taylor Swift: A Little Golden Book Biography](#)
- [A Court Of Mist And Fury \(a Court Of Thorns And Roses, 2\)](#)
- [A Soul Of Ash And Blood: A Blood And Ash Novel \(blood And Ash Series\) By Jennifer L. Armentrout](#)
- [A Court Of Silver Flames \(a Court Of Thorns And Roses, 5\)](#)
- [The Light We Carry: Overcoming In Uncertain Times By Michelle Obama](#)