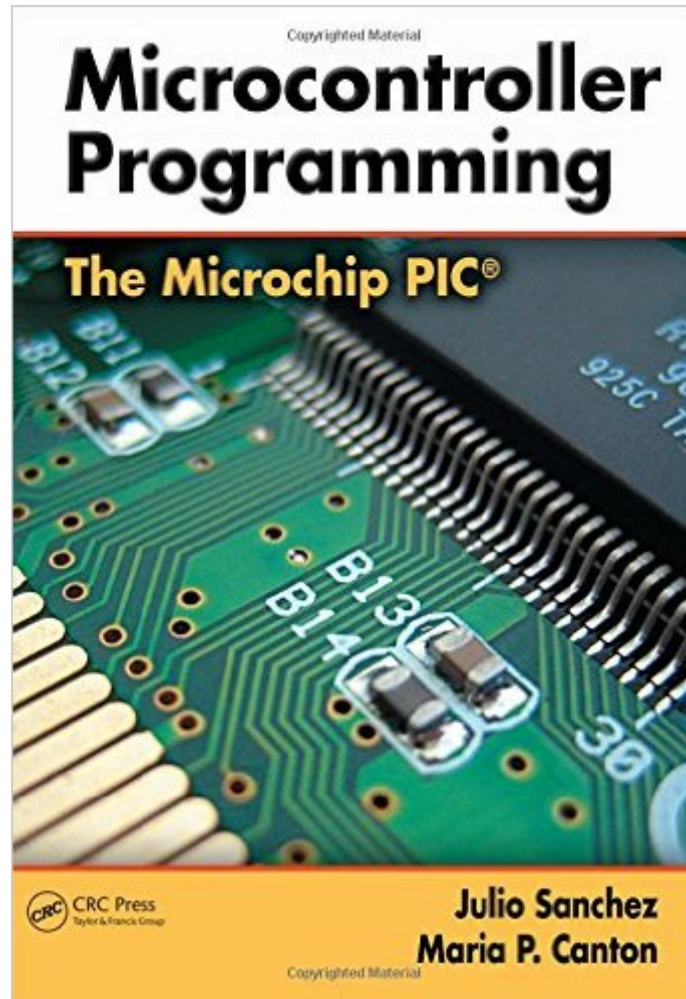# Microcontroller Programming: The Microchip PIC

Synopsis

From cell phones and television remote controls to automobile engines and spacecraft, microcontrollers are everywhere. Programming these prolific devices is a much more involved and integrated task than it is for general-purpose microprocessors; microcontroller programmers must be fluent in application development, systems programming, and I/O operation as well as memory management and system timing. Using the popular and pervasive mid-range 8-bit Microchip PICÂ® as an archetype, Microcontroller Programming offers a self-contained presentation of the multidisciplinary tools needed to design and implement modern embedded systems and microcontrollers. The authors begin with basic electronics, number systems, and data concepts followed by digital logic, arithmetic, conversions, circuits, and circuit components to build a firm background in the computer science and electronics fundamentals involved in programming microcontrollers.For the remainder of the book, they focus on PIC architecture and programming tools and work systematically through programming various functions, modules, and devices. Helpful appendices supply the full mid-range PIC instruction set as well as additional programming solutions, a guide to resistor color codes, and a concise method for building custom circuit boards.Providing just the right mix of theory and practical guidance, Microcontroller Programming: The Microchip PICÂ® is the ideal tool for any amateur or professional designing and implementing stand-alone systems for a wide variety of applications.

Book Information

Hardcover: 824 pages

Publisher: CRC Press (December 19, 2006)

Language: English

ISBN-10: 0849371899

ISBN-13: 978-0849371899

Product Dimensions: 7.3 x 1.9 x 10 inches

Shipping Weight: 3.5 pounds (View shipping rates and policies)

Average Customer Review: 3.5 out of 5 starsÂ Â See all reviewsÂ (2 customer reviews)

Best Sellers Rank: #3,318,583 in Books (See Top 100 in Books)   #84 inÂ Books > Computers & Technology > Hardware & DIY > Microprocessors & System Design > PIC Microcontroller   #2810 inÂ Books > Engineering & Transportation > Engineering > Electrical & Electronics > Circuits #7004 inÂ Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics

Customer Reviews

My experience of this book was quite different from that expressed in the earlier review. I was repeatedly frustrated. Many terms and concepts were introduced without any explanation or description, ever. Far too many pages contained long programs which did not appear to reflect either the best programming or pedagogical practice. Despite the length of this book, the range and depth of actual Microchip programming technique coverage seemed superficial.

This book has it all for the beginner to the advanced. I only wish I had access to this book last year before I started PICMicro programming. It would have saved me countless hours of web searches. I swear, every aspect (and more) of programming PICs I have researched and bookmarked is here in this book. Many examples to be used and expanded upon easily. Only wish they would have used the more current 16F628A as a basis instead of the outdated 16F84A -- although to be fair, the examples can be used for any of the entire line 8-bit microcontrollers with only minor modifications (like telling the compiler it's a different chip and changing which pins for out and in -- easy). Serial communications, LCD interfacing, external EEPROM use, RTC's -- this book has it all. Should be used as a textbook for a course -- very comprehensive, not to mention up-to-date info on this subject (for once!). Quite pricey but worth it if you want to save yourself time and have ONE place to go for reference.

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