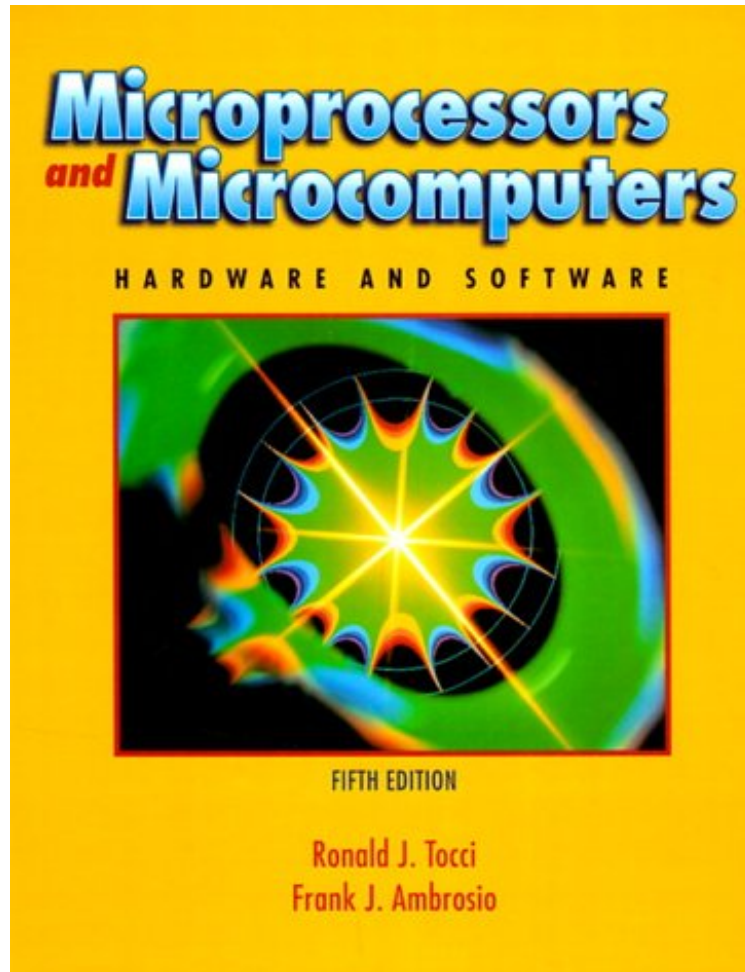


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Microprocessors and Microcomputers: Hardware and Software (5th Edition)

Ronald J. Tocci, Frank J. Ambrosio, Lester Laskowski
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Ronald J. Tocci, Frank J. Ambrosio, Lester Laskowski : Microprocessors and Microcomputers: Hardware and Software (5th Edition) before purchasing it in order to gauge whether or not it would be worth my time, and all praised Microprocessors and Microcomputers: Hardware and Software (5th Edition):

1 of 1 people found the following review helpful. I was able to comprehend AVR 328 MCU datasheet and enjoy the joy of Arduino projects By sudoI bought a used book. I'm a software guy. But I have always been fascinated by the hardware. I had taken a few typical required HW courses for CS major many years ago. They were more than enough for software people. But I felt the magic was still unraveled. Over the years I picked up a few books for self-study including Ronald J. Tocci's Digital Systems. I found the author's explaining very insightful which is what had been missing (or missed by me) in those courses or other textbooks I ran into. This text provides an insightful machine code

level description of the operation detail of an 8-bit MCU. I went through ch2-ch9 and most of questions and problems. In the end, I felt the urge to hand assembling some machine code to catch the falling edge of a RS-232 serial signal. Of course this is not the goal. Armed with the knowledge and background, I was able to comprehend AVR 328 MCU datasheet and enjoy the joy of Arduino projects. 0 of 0 people found the following review helpful. Thanks! By CustomerBook came fast. New in wrapper, as promised. Happy with it 0 of 0 people found the following review helpful. This book came on time and was fairly cheap in ... By Precious Smith This book came on time and was fairly cheap in comparison to other websites as well as the university.

For introductory microprocessors and/or microcomputers courses that do not teach a specific chip, but instead teach generic concepts. The course may be found in departments of electronics technology, electrical engineering technology, computer engineering technology and computer science programs. Using the popular, powerful, and easy-to-understand 68HC11 microprocessor as a representative example, this text provides a comprehensive introduction to the concepts, principles, and techniques of microprocessors and microprocessor based systems.

From the Publisher Using the currently popular, powerful, yet easy to understand Motorola 68HC11 microcontroller as a representative example, this text provides a comprehensive introduction to the concepts, principles, and techniques of microprocessors and microprocessor-based systems. From the Back Cover 9D, 0-13-010494-9, Tocci, Ronald, Laskowski, Lester, and Ambrosio, Frank, *Microprocessors and Microcomputers: Hardware and Software*, Fifth Edition Using the popular, powerful, and easy to understand 68HC11 microprocessor as a representative example, this book provides a comprehensive introduction to the concepts, principles, and techniques of microprocessors and microprocessor-based systems. Equips the reader with the basic principles and techniques involved in digital systems technology throughout the book, in case studies, and in end-of-chapter questions and problems. Includes over 400 chapter-end problems of varying complexity many with answers in the back of the text. Contains an extensive appendix with a detailed description of each of the 68HC11's available instructions For professionals in the computer technology field. Excerpt. Reprinted by permission. All rights reserved. This book was written to provide a comprehensible introduction to microprocessors and microcomputers for a broad range of readers. It can serve as a textbook in electronic technology, computer technology, and computer science programs from the vocational school to four-year college level. It can also be used by computer hobbyists as well as practicing technicians and engineers. A significant portion of the text requires a basic knowledge of digital principles and circuits. For this reason, a comprehensive review of this material is presented in the first three chapters to help those readers who have only a minimal background or who have been away from the field for a while. It is, however, worth noting that in several sections of Chapter 8, the topic of A/D conversion is addressed. For a better understanding of the text in these sections, elementary knowledge of Analog-to-Digital Converters (ADCs) is required. The major philosophy that has been followed in this book is that the principles and techniques of microprocessors and microprocessor-based systems are the most important concepts to understand, and it is not necessary to survey the whole field of available microprocessors and microprocessor applications. We believe that the best pedagogical approach is to use a currently popular, powerful, yet easy-to-understand microprocessor chip as the vehicle for teaching these concepts. We also believe that since 8-bit microprocessors are simple and easy to understand, this makes them an appropriate choice for an introductory textbook. As such, we have chosen to use the 68HC11 microprocessor as that vehicle. The 68HC11 is one of the most powerful and flexible 8-bit microprocessors in general use, and it contains all of the elements and features that need to be part of an introduction to microprocessors and microprocessor applications. Everything the reader learns and understands using this representative device can be readily transferred to other microprocessors and applications, including the more complex 16-bit and 32-bit devices. This sixth edition retains all of the valuable learning aids of the previous editions, including (1) extensive use of clearly explained illustrative examples to provide immediate reinforcement; (2) clear, uncluttered diagrams to enhance the understanding of the written material; (3) liberal use of flowcharts; (4) extensive coverage of material on troubleshooting digital systems, internal and external IC faults, and test equipment used to troubleshoot digital systems; (5) several Troubleshooting Case Studies covering I/O interfacing circuits and RAM decoding logic in a 68HC 11-based circuit; (6) glossaries of important terms at the end of each chapter for easy review of chapter contents; (7) over 470 end-of-chapter questions and problems of varied complexity; (8) a comprehensive index with certain page numbers in boldface type to indicate end-of-chapter glossary definitions; and (9) an extensive appendix containing a detailed description of each of the 68HC 11's available instructions as well as a complete Op-Code vs. Instruction Cross Reference. The major enhancements to this edition are the inclusion of material on floating point numbers and the use of additional pictures, illustrations, and exercises its the explanation of certain concepts. This includes the following: Chapter 1. Addition of material on floating-point numbers and Motorola 68HC11 Floating-Point Format. Chapters 7-9. Use of the industry standard of one instruction per line when writing assembly language programs. Chapter 7. Inclusion of illustrative aids and step-by-step analysis to explain several addressing modes of the 68HC 11 microcontroller. All Chapters. Significant increase in the number of end-of-chapter questions, problems, and troubleshooting exercises. Expansion of Appendix A to include the

reference list and the Opcode Maps for all of the 68HC 11 MCU Instruction Types. In preparing this sixth edition, the very helpful comments and suggestions of several users and reviewers were considered and acted upon. The authors particularly wish to acknowledge Rickey McFadden, Paris Junior College, Paris, TX; Vincent Kassab, Erie Community College North Campus, Williamsville, NY; Fereydoun Jalali, Fort Valley State University, Fort Valley, GA; and Gabor Karsai, Vanderbilt University, Nashville, TN, who assisted in this capacity. Ronald J. Tocci Frank J. Ambrosio Monroe Community College