
Digital Logic Design And Application

Digital Logic Circuits using VHDL
Using Verilog, State Machines, and Synthesis for FPGAs
Foundation of Digital Electronics and Logic Design
A Practice Book for Digital Logic Design
An Experimental Approach
Digital Electronics
Digital Logic Applications And Design
Fundamentals of Digital Logic Design
Digital Principles & Logic Design
Foundations of Digital Logic Design
Coding and RTL Synthesis
Digital Design Techniques and Exercises
Its Application in Communication and Technology
Digital Logic Design
Third Edition
With VLSI Circuit Applications
Introduction to Logic Design
Digital Logic Design
Advanced Digital Logic Design
Fundamentals of Digital Logic Design, with VLSI Applications
Digital Design
Digital Logic Design and Computer Organization with Computer Architecture for Security
Fundamentals of Digital Logic and Microcomputer Design
A Systematic Approach to Digital Logic Design
Digital Logic Design Principles
Design Principles and Applications

Digital Logic Design
Computer, Network, Software, and Hardware Engineering with Applications
Digital Systems
Fundamentals of Digital Logic with Verilog Design
With an Introduction to Verilog and FPGA-Based Design
From Logic Gates to Processors
Introduction to Logic Design, Second Edition
Applications and Design
DIGITAL LOGIC DESIGN
Computer Logic
Digital Logic Design
Digital Logic Design Using Verilog
A Rigorous Approach

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WARREN CARDENAS

Digital Logic Circuits using VHDL John Wiley & Sons
This book is designed to serve as a hands-on professional reference with additional utility as a textbook for upper undergraduate and some graduate courses in digital logic design. This book is organized in such a way that it can describe a number of RTL design scenarios, from simple to complex. The book constructs the logic design story from the fundamentals of logic design to advanced RTL design concepts. Keeping in view the importance of miniaturization today, the book gives practical information on the issues with ASIC RTL design and how to overcome these concerns. It clearly explains how to write an efficient RTL code and how to improve design performance. The

book also describes advanced RTL design concepts such as low-power design, multiple clock-domain design, and SOC-based design. The practical orientation of the book makes it ideal for training programs for practicing design engineers and for short-term vocational programs. The contents of the book will also make it a useful read for students and hobbyists.

Using Verilog, State Machines, and Synthesis for FPGAs Digital Logic Design

For sophomore courses on digital design in an Electrical Engineering, Computer Engineering, or Computer Science department. & Digital Design, fourth edition is a modern update of the classic authoritative text on digital design.& This book teaches the basic concepts of digital design in a clear, accessible manner. The book presents the basic tools for the design of digital circuits and provides procedures suitable for a variety of

digital applications.

Foundation of Digital Electronics and Logic Design Springer Nature

This text is intended for a first course in digital logic design, at the sophomore or junior level, for electrical engineering, computer engineering and computer science programs, as well as for a number of other disciplines such as physics and mathematics. The book can also be used for self-study or for review by practicing engineers and computer scientists not intimately familiar with the subject. After completing this text, the student should be prepared for a second (advanced) course in digital design, switching and automata theory, microprocessors or computer organization.

A Practice Book for Digital Logic Design CRC Press

DIGITAL LOGIC offers the right balance of classical and up-to-date treatment of combinational and sequential logic design for a first digital logic design class. The author provides a thorough explanation of the design process, including completely worked examples beginning with simple examples and going on to problems of increasing complexity. This text contains PLD (Programmable Logic Design) coverage. Chapter 9 develops complete, worked EPROM, PLA, and EPLD design examples. The problems are developed in Chapter 7 as standard designs using SSI and MSI devices so that your students can see the difference between the two approaches.

An Experimental Approach Springer

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Digital Electronics BPB Publications

Digital Logic Design is a comprehensive textbook, which aims to provide entry level readers a quick start to the field of digital logic design so as to facilitate them with the capability suitable for the versatility of social change and interdisciplinary learning. This textbook can be used as a textbook for classroom use in the fields of electronics, electrical, computer science, information engineering, mechanical, and soon. The salient features of this textbook are as follows: 1. Introduce incrementally the principles of digital logic design and exemplify each basic theme and concept with abundant illustrations. 2. Detail design principles of various combinational modules, including decoders, encoders, multiplexers, demultiplexers, arithmetic circuits, and so on. 3. Introduce design principles of various sequential modules, including counters, registers, shift registers, sequence generators, etc. 4. Address the structures, features, and applications of PLD/FPGA devices. 5. Exemplify applications of CPLD/FPGA devices with Verilog HDL modules. 6. Provide 20 basic and application experiments of digital logic to help readers verify the consistence of digital logic between principles and practice. 7. Include an abundance of review questions in each section to help readers evaluate their understandings about the section. 8. Deal with Verilog HDL concisely in relevant sections so as to make the reader understand how to describe a logic circuit in Verilog HDL precisely. Digital Logic Design is an ideal textbook for the digital logic design course in the fields of electronics, electrical, computer science, information engineering, mechanical, etc, or serves as a valuable reference book for self-study.

Digital Logic Applications And Design Technical Publications

The fundamentals and implementation of digital electronics are essential to understanding the design and working of consumer/industrial electronics, communications, embedded systems, computers, security and military equipment. Devices used in applications such as these are constantly decreasing in size and employing more complex technology. It is therefore essential for engineers and students to understand the fundamentals, implementation and application principles of digital electronics, devices and integrated circuits. This is so that they can use the most appropriate and effective technique to suit their technical need. This book provides practical and comprehensive coverage of digital electronics, bringing together information on fundamental theory, operational aspects and potential applications. With worked problems, examples, and review questions for each chapter, Digital Electronics includes: information on number systems, binary codes, digital arithmetic, logic gates and families, and Boolean algebra; an in-depth look at multiplexers, de-multiplexers, devices for arithmetic operations, flip-flops and related devices, counters and registers, and data conversion circuits; up-to-date coverage of recent application fields, such as programmable logic devices, microprocessors, microcontrollers, digital troubleshooting and digital instrumentation. A comprehensive, must-read book on digital electronics for senior undergraduate and graduate students of electrical, electronics and computer engineering, and a valuable reference book for professionals and researchers.

Fundamentals of Digital Logic Design McGraw-Hill Higher Education

Digital Logic Design Elsevier

Digital Principles & Logic Design Pearson Educación

This textbook, based on the author's fifteen years of teaching, is a complete teaching tool for turning students into logic designers in one semester. Each chapter describes new concepts, giving extensive applications and examples. Assuming no prior knowledge of discrete mathematics, the authors introduce all background in propositional logic, asymptotics, graphs, hardware and electronics. Important features of the presentation are: • All material is presented in full detail. Every designed circuit is formally specified and implemented, the correctness of the implementation is proved, and the cost and delay are analyzed • Algorithmic solutions are offered for logical simulation, computation of propagation delay and minimum clock period • Connections are drawn from the physical analog world to the digital abstraction • The language of graphs is used to describe formulas and circuits • Hundreds of figures, examples and exercises enhance understanding. The extensive website (<http://www.eng.tau.ac.il/~guy/Even-Medina/>) includes teaching slides, links to Logisim and a DLX assembly simulator.

Foundations of Digital Logic Design Elsevier

A COMPREHENSIVE GUIDE TO THE DESIGN & ORGANIZATION OF MODERN COMPUTING SYSTEMS Digital Logic Design and Computer Organization with Computer Architecture for Security provides practicing engineers and students with a clear understanding of computer hardware technologies. The fundamentals of digital logic design as well as the use of the Verilog hardware description language are discussed. The book covers computer organization and architecture, modern design

concepts, and computer security through hardware. Techniques for designing both small and large combinational and sequential circuits are thoroughly explained. This detailed reference addresses memory technologies, CPU design and techniques to increase performance, microcomputer architecture, including "plug and play" device interface, and memory hierarchy. A chapter on security engineering methodology as it applies to computer architecture concludes the book. Sample problems, design examples, and detailed diagrams are provided throughout this practical resource. **COVERAGE INCLUDES:** Combinational circuits: small designs Combinational circuits: large designs Sequential circuits: core modules Sequential circuits: small designs Sequential circuits: large designs Memory Instruction set architecture Computer architecture: interconnection Memory system Computer architecture: security

Coding and RTL Synthesis McGraw Hill Professional

With an abundance of insightful examples, problems, and computer experiments, Introduction to Logic Design provides a balanced, easy-to-read treatment of the fundamental theory of logic functions and applications to the design of digital devices and systems. Requiring no prior knowledge of electrical circuits or electronics, it supplies the

Digital Design Techniques and Exercises John Wiley & Sons

New, updated and expanded topics in the fourth edition include: EBCDIC, Grey code, practical applications of flip-flops, linear and shaft encoders, memory elements and FPGAs. The section on fault-finding has been expanded. A new chapter is dedicated to the interface between digital components and analog voltages.

*A highly accessible, comprehensive and fully up to date digital

systems text *A well known and respected text now revamped for current courses *Part of the Newnes suite of texts for HND/1st year modules

Its Application in Communication and Technology

Routledge

Fundamentals of Digital Logic With Verilog Design teaches the basic design techniques for logic circuits. It emphasizes the synthesis of circuits and explains how circuits are implemented in real chips. Fundamental concepts are illustrated by using small examples. Use of CAD software is well integrated into the book. A CD-ROM that contains Altera's Quartus CAD software comes free with every copy of the text. The CAD software provides automatic mapping of a design written in Verilog into Field Programmable Gate Arrays (FPGAs) and Complex Programmable Logic Devices (CPLDs). Students will be able to try, firsthand, the book's Verilog examples (over 140) and homework problems. Engineers use Quartus CAD for designing, simulating, testing and implementing logic circuits. The version included with this text supports all major features of the commercial product and comes with a compiler for the IEEE standard Verilog language. Students will be able to: enter a design into the CAD system compile the design into a selected device simulate the functionality and timing of the resulting circuit implement the designs in actual devices (using the school's laboratory facilities) Verilog is a complex language, so it is introduced gradually in the book. Each Verilog feature is presented as it becomes pertinent for the circuits being discussed. To teach the student to use the Quartus CAD, the book includes three tutorials.

Digital Logic Design John Wiley & Sons

This book provides the reader with the key concepts and techniques of modern digital logic design and applications. This concise treatment provides essential development and explanations for both classical and modern topics. The modern topics include unicode, unipolar transistors, copper technology, flash memory, HDL, verilog and logic simulation software tools. Also covered are combinatorial logic circuits and transistor circuits. It will be an essential resource for computer scientists, logic circuit designers and computer engineers.

Third Edition Pws Publishing Company

Hardware -- Logic Design.

With VLSI Circuit Applications Morgan & Claypool Publishers

This book is your beginner's guide to simple logic programming. Digital design is based on the binary principle, where everything is either 0 or 1, either low or high. Few people realize that digital logic existed before the advent of the computer. Digital logic was used for control and communications systems even before semiconductors were invented. They worked using switches, relays, and solenoids. If you search the internet you will not find the phrase digital logic separate from computers. It's like the only purpose for digital logic was to invent the computer.

Introduction to Logic Design Prentice Hall

This book presents the basic concepts used in the design and analysis of digital systems and introduces the principles of digital computer organization and design.

Digital Logic Design Prentice Hall

Hardware -- Logic Design.

Advanced Digital Logic Design CRC Press

PRINCIPLES OF MODERN DIGITAL DESIGN FROM UNDERLYING

PRINCIPLES TO IMPLEMENTATION—A THOROUGH INTRODUCTION TO DIGITAL LOGIC DESIGN With this book, readers discover the connection between logic design principles and theory and the logic design and optimization techniques used in practice.

Therefore, they not only learn how to implement current design techniques, but also how these techniques were developed and why they work. With a deeper understanding of the underlying principles, readers become better problem-solvers when faced with new and difficult digital design challenges. Principles of Modern Digital Design begins with an examination of number systems and binary code followed by the fundamental concepts of digital logic. Next, readers advance to combinational logic design. Armed with this foundation, they are then introduced to VHDL, a powerful language used to describe the function of digital circuits and systems. All the major topics needed for a thorough understanding of modern digital design are presented, including: Fundamentals of synchronous sequential circuits and synchronous sequential circuit design Combinational logic design using VHDL Counter design Sequential circuit design using VHDL Asynchronous sequential circuits VHDL-based logic design examples are provided throughout the book to illustrate both the underlying principles and practical design applications. Each chapter is followed by exercises that enable readers to put their skills into practice by solving realistic digital design problems. An accompanying website with Quartus II software enables readers to replicate the book's examples and perform the exercises. This book can be used for either a two- or one-semester course for undergraduate students in electrical and computer engineering and computer science. Its thorough explanation of theory,

coupled with examples and exercises, enables both students and practitioners to master and implement modern digital design techniques with confidence.

Fundamentals of Digital Logic Design, with VLSI Applications John Wiley & Sons

This book describes digital design techniques with exercises. The concepts and exercises discussed are useful to design digital logic from a set of given specifications. Looking at current trends of miniaturization, the contents provide practical information on the issues in digital design and various design optimization and performance improvement techniques at logic level. The book

explains how to design using digital logic elements and how to improve design performance. The book also covers data and control path design strategies, architecture design strategies, multiple clock domain design and exercises, low-power design strategies and solutions at the architecture and logic-design level. The book covers 60 exercises with solutions and will be useful to engineers during the architecture and logic design phase. The contents of this book prove useful to hardware engineers, logic design engineers, students, professionals and hobbyists looking to learn and use the digital design techniques during various phases of design.