
Digital Logic Circuits

By P S Manoharan

Logic Circuit Design
Foundations of Analog and Digital Electronic Circuits
Fundamentals of Digital Logic with Verilog Design
Design, Analysis and Test of Logic Circuits Under Uncertainty
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Digital Design
Quantum-dot Cellular Automata Based Digital Logic Circuits
Foundation of Digital Electronics and Logic Design
Digital Electronic Circuits
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Digital Systems Design
Digital Logic
Digital Logic Techniques
Digital Logic Circuits using VHDL
Digital Logic Design Principles
Digital Logic Design
Digital Circuits and Logic Design
High-Frequency Integrated Circuits
Digital Logic Design
Fundamentals of Digital Logic and Microcomputer Design
CMOS Logic Circuit Design
Logic Design of NanoICS

Practical Digital Logic Design and Testing
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 Principles of Modern Digital Design
 Digital Logic Circuits
 Digital Electronics : Theory And Experiments
 Fundamentals of Digital Logic and
 Microcontrollers
 Digital Systems
 Introduction to Digital Logic Design
 DIGITAL LOGIC DESIGN
 Digital Fundamentals
 Introduction to Logic Circuits & Logic Design with
 Verilog
 Digital Logic Circuits
 Digital Principles and Logic Design
 SWITCHING THEORY AND LOGIC DESIGN
 Digital Circuits
 Electronic Logic Circuits
 Digital Logic and Computer Design

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PS Manoharan *by guest*

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*Logic Circuit
 Design*

McGraw-Hill
 Science/Engineering/Math
 The
 fundamentals

and ns, embedded
 implementatio systems,
 n of digital computers,
 electronics are security and
 essential to military
 understanding equipment.
 the design Devices used
 and working of in applications
 consumer/ind such as these
 ustrial are constantly
 electronics, decreasing in
 communicatio 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.

Foundations of Analog and Digital Electronic Circuits

John Wiley & Sons
The author is the leading programming language designer of our time and in this book, based on a course for 2nd-year students at, he closes the

gap between hardware and software design. He encourages students to put the theory to work in exercises that include lab work culminating in the design of a simple yet complete computer. In short, a modern introduction to designing circuits using state-of-the-art technology and a concise, easy to master hardware description language (Lola).
Fundamentals of Digital

Logic with Verilog Design
CRC Press

In three main divisions the book covers combinational circuits, latches, and asynchronous sequential circuits. Combinational circuits have no memorising ability, while sequential circuits have such an ability to various degrees. Latches are the simplest sequential circuits, ones with the shortest memory. The presentation is decidedly non-standard.

The design of combinational circuits is discussed in an orthodox manner using normal forms and in an unorthodox manner using set-theoretical evaluation formulas relying heavily on Karnaugh maps. The latter approach allows for a new design technique called composition. Latches are covered very extensively. Their memory functions are expressed mathematically in a time-independent

manner allowing the use of (normal, non-temporal) Boolean logic in their calculation. The theory of latches is then used as the basis for calculating asynchronous circuits. Asynchronous circuits are specified in a tree-representation, each internal node of the tree representing an internal latch of the circuit, the latches specified by the tree itself. The tree specification

allows solutions of formidable problems such as algorithmic state assignment, finding equivalent states non-recursively, and verifying asynchronous circuits.

Design, Analysis and Test of Logic Circuits

Under Uncertainty

Springer
Digital Logic Circuits
Sree kamalamani Publications private limited
Digital Electronics
CRC Press
Updated to reflect the latest

advances in the field, the Sixth Edition of Fundamentals of Digital Logic and Microcontrollers further enhances its reputation as the most accessible introduction to the basic principles and tools required in the design of digital systems. Features updates and revision to more than half of the material from the previous edition Offers an all-encompassing focus on the areas of

computer design, digital logic, and digital systems, unlike other texts in the marketplace Written with clear and concise explanations of fundamental topics such as number system and Boolean algebra, and simplified examples and tutorials utilizing the PIC18F4321 microcontroller Covers an enhanced version of both combinational and sequential logic design,

basics of computer organization, and microcontrollers
Digital Design
 Technical Publications
 This book focuses on the basic principles of digital electronics and logic design. It is designed as a textbook for undergraduate students of electronics, electrical engineering, computer science, physics, and information technology. The text covers the syllabi of

several Indian and foreign universities. It depicts the comprehensive resources

Quantum-dot Cellular Automata Based Digital Logic Circuits

Pearson Education India Textbook *Foundation of Digital Electronics and Logic Design* Wiley Today's engineers will confront the challenge of a new computing paradigm, relying on micro- and nanoscale devices. Logic

Design of NanolCs builds a foundation for logic in nanodimensions and guides you in the design and analysis of nanolCs using CAD. The authors present data structures developed toward applications rather than a purely theoretical treatment. Requiring only basic logic and circuits background, *Logic Design of NanolCs* draws connections between traditional approaches to

design and modern design in nanodimensions. The book begins with an introduction to the directions and basic methodology of logic design at the nanoscale, then proceeds to nanotechnologies and CAD, graphical representation of switching functions and networks, word-level and linear word-level data structures, 3-D topologies based on hypercubes, multilevel circuit design, and fault-

tolerant computation in hypercube-like structures. The authors propose design solutions and techniques, going beyond the underlying technology to provide more applied knowledge. This design-oriented reference is written for engineers interested in developing the next generation of integrated circuitry, illustrating the discussion with approximately 250 figures

and tables, 100 equations, 250 practical examples, and 100 problems. Each chapter concludes with a summary, references, and a suggested reading section. *Digital Electronic Circuits* PHI Learning Pvt. Ltd. DIGITAL LOGIC **Digital Circuit Design for Computer Science Students** Elsevier This comprehensive text on switching

theory and logic design is designed for the undergraduate students of electronics and communication engineering, electrical and electronics engineering, electronics and instrumentation engineering, telecommunication engineering, computer science and engineering, and information technology. It will also be useful to AMIE, IETE and diploma students. Written in a

student-friendly style, this book, now in its Second Edition, provides an in-depth knowledge of switching theory and the design techniques of digital circuits. Striking a balance between theory and practice, it covers topics ranging from number systems, binary codes, logic gates and Boolean algebra to minimization using K-maps and tabular method, design of combinational

logic circuits, synchronous and asynchronous sequential circuits, and algorithmic state machines. The book discusses threshold gates and programmable logic devices (PLDs). In addition, it elaborates on flip-flops and shift registers. Each chapter includes several fully worked-out examples so that the students get a thorough grounding in related design concepts. Short

questions with answers, review questions, fill in the blanks, multiple choice questions and problems are provided at the end of each chapter. These help the students test their level of understanding of the subject and prepare for examinations confidently.

NEW TO THIS EDITION

- VHDL programs at the end of each chapter
- Complete answers with figures
- Several new problems with

answers
*Digital
 Systems
 Design* John
 Wiley & Sons
 This textbook
 is intended to
 introduce the
 student of
 electronics to
 the
 fundamentals
 of digital
 circuits, both
 combinational
 and
 sequential, in
 a reasonable
 and
 systematic
 manner. It
 proceeds from
 basic logic
 concepts to
 circuits and
 designs.

Digital Logic

Springer
 Science &
 Business
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 PRINCIPLES OF

MODERN
 DIGITAL
 DESIGN FROM
 UNDERLYING
 PRINCIPLES
 TO
 IMPLEMENTATI
 ON—A
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 N 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.

Digital Logic Techniques

Digital Logic Circuits Logic circuits are becoming increasingly susceptible to probabilistic behavior caused by external radiation and process variation. In addition, inherently probabilistic quantum- and nano-technologies

are on the horizon as we approach the limits of CMOS scaling.

Ensuring the reliability of such circuits despite the probabilistic behavior is a key challenge in IC design---one that necessitates a fundamental, probabilistic reformulation of synthesis and testing techniques.

This monograph will present techniques for analyzing, designing, and testing logic circuits with probabilistic behavior.

Digital Logic

Circuits using VHDL

John Wiley & Sons

As electronic devices become increasingly prevalent in everyday life, digital circuits are becoming even more complex and smaller in size. This book presents the basic principles of digital electronics in an accessible manner, allowing the reader to grasp the principles of combinational and sequential logic and the underlying techniques for

the analysis and design of digital circuits. Providing a hands-on approach, this work introduces techniques and methods for establishing logic equations and designing and analyzing digital circuits. Each chapter is supplemented with practical examples and well-designed exercises with worked solutions. This second of three volumes focuses on sequential and arithmetic logic circuits.

It covers various aspects related to the following topics: latch and flip-flop; binary counters; shift registers; arithmetic and logic circuits; digital integrated circuit technology; semiconductor memory; programmable logic circuits. Along with the two accompanying volumes, this book is an indispensable tool for students at a bachelors or masters level seeking to improve their

understanding of digital electronics, and is detailed enough to serve as a reference for electronic, automation and computer engineers. *Digital Logic Design Principles* CRC Press
PREFACE OF THE BOOK
This book is extensively designed for the third semester EEE/EIE students as per Anna university syllabus R-2013. The following chapters constitute the following units

Chapter 1, 9 covers :-Unit 1	implementation of switching function using basic Logical Gates and Universal Gates.	Analysis as well as design of synchronous sequential circuits, Design of synchronous counters, sequence generator and Sequence detector
Chapter 2 and 3 covers :-Unit 2	CHAPTER 3: Describes the combinational circuits like Adder, Subtractor, Multiplier, Divider, magnitude comparator, encoder, decoder, code converters, Multiplexer and Demultiplexer.	CHAPTER 6: Concentrates the Design as well as Analysis of Fundamental Mode circuits, Pulse mode Circuits, Hazard Free Circuits, ASM Chart and Design of Asynchronous counters.
Chapter 4 and 5 covers :-Unit 3	CHAPTER 4: Describes with Latches, Flip-Flops, Registers and Counters	CHAPTER 7: Discussion on memory devices which
Chapter 6 and 7 covers :- Unit 4	CHAPTER 5: Concentrates on the	
Chapter 8 VHDL :-Unit 5		
CHAPTER 1: Introduces the Number System, binary arithmetic and codes.		
CHAPTER 2: Deals with Boolean algebra, simplification using Boolean theorems, K-map method , Quine McCluskey method, logic gates,		

includes ROM, RAM, PLA, PAL, Sequential logic devices and ASIC. CHAPTER 8: The chapter concentrates on the design, fundamental building blocks, Data types, operates, subprograms, packages, compilation process used for VHDL. It discusses on Finite state machine as an important tool for designing logic level state machines. The chapter also discusses register transform

level designing and test benches usage in stimulation of the state logic machines CHAPTER 9: Concentrate on the comparison, operation and characteristics of RTL, DTL, TTL, ECL and MOS families. We have taken enough care to present the definitions and statements of basic laws and theorems, problems with simple steps to make the students familiar with the fundamentals of Digital

Design. Digital Logic Design Springer Science & Business Media This book covers several futuristic computing technologies like quantum computing, quantum-dot cellular automata, DNA computing, and optical computing. In turn, it explains them using examples and tutorials on a CAD tool that can help beginners get a head start in QCA layout design. It

discusses research on the design of circuits in quantum-dot cellular automata (QCA) with the objectives of obtaining low-complexity, robust designs for various arithmetic operations. The book also investigates the systematic reduction of majority logic in the realization of multi-bit adders, dividers, ALUs, and memory. Digital Circuits and Logic Design Jones & Bartlett Learning 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 *High-Frequency Integrated Circuits* John Wiley & Sons *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 Technical Publications This text and reference provides students and practicing engineers with an introduction to the classical methods of designing electrical circuits, but incorporates modern logic design techniques used in the latest microprocessors, microcontrollers,

microcomputers, and various LSI components. The book provides a review of the classical methods e.g., the basic concepts of Boolean algebra, combinational logic and sequential logic procedures, before engaging in the practical design approach and the use of computer-aided tools. The book is enriched with numerous examples (and their solutions),

over 500 illustrations, and includes a CD-ROM with simulations, additional figures, and third party software to illustrate the concepts discussed in the book. Fundamentals of Digital Logic and Microcomputer Design John Wiley & Sons The book is written for an undergraduate course on digital electronics. The book provides basic concepts, procedures and several relevant examples to

<p>help the readers to understand the analysis and design of various digital circuits. It also introduces hardware description language, VHDL. The book teaches you the logic gates, logic families, Boolean algebra,</p>	<p>simplification of logic functions, analysis and design of combinational circuits using SSI and MSI circuits and analysis and design of the sequential circuits. This book provides in-depth information about multiplexers,</p>	<p>de-multiplexers, decoders, encoders, circuits for arithmetic operations, various types of flip-flops, counters and registers. It also covers asynchronous sequential circuits, memories and programmable logic devices.</p>
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- [Haunting Adeline \(cat And Mouse Duet\) By H. D. Carlton](#)
- [It Starts With Us: A Novel \(2\) \(it Ends With Us\) By Colleen Hoover](#)
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