
Digital Logic Circuits

A Rigorous Approach

Principles and Practices

Digital Electronics 1

Digital Logic Circuits (As Per Anna University)

Fundamentals and Applications of Digital Logic Circuits

Electronic Logic Circuits

Digital Circuits From Basic Level: Digital Logic Circuits Pdf

Logic and Design

Digital Electronics: A Primer - Introductory Logic Circuit Design

Baby Steps: Intro to Computer Engineering

Digital Logic Circuits

Digital Logic Design

Digital Logic Circuit Analysis and Design

Digital Logic Design

Operation and Analysis

DIGITAL LOGIC DESIGN

Digital Logic Circuits

Digital Circuits
Introduction to Logic Circuits & Logic Design with VHDL
Digital Electronic Circuits
Mach 1 GHz
Digital Circuits
Third Edition
Pragmatic Logic
Digital Electronics with PLD Integration
Sequential and Arithmetic Logic Circuits
Fundamentals of Digital Logic with Verilog Design
Electronic Logic Circuits
Digital Electronics : Circuits and Systems
Digital Logic Circuits using VHDL
Digital Logic Circuits
Digital Electronics 2
Logic Circuits
An Introduction to Logic Circuit Testing
DIGITAL LOGIC DESIGN
Introduction to Digital Logic
Digital Electronics, Volume 1

Digital Electronic Circuits - The Comprehensive View
Combinational Logic Circuits
CMOS Logic Circuit Design

*Downloaded
from
Digital Logic Circuits* <ftp.wtvq.com> *by
guest*

DWAYNE COWAN

A Rigorous Approach
Prentice Hall

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. *Principles and Practices* Elsevier

A unique, practical approach to the design of high-speed digital circuit boards The demand for ever-faster digital circuit

designs is beginning to render the circuit theory used by engineers ineffective. Digital Circuit Boards presents an alternative to the circuit theory approach, emphasizing energy flow rather than just signal interconnection to explain logic circuit behavior. The book shows how treating design in terms of transmission lines will ensure that the logic will function, addressing both storage and movement of electrical energy on these lines. It covers transmission lines in all

forms to illustrate how trace geometry defines where the signals can travel, then goes on to examine transmission lines as energy sources, the true nature of decoupling, types of resonances, ground bounce, cross talk, and more. Providing designers with the tools they need to lay out digital circuit boards for fast logic and to get designs working the first time around, Digital Circuit Boards: Reviews in simple terms the basic physics necessary to understand fast logic

design Debunks the idea that electrical conductors carry power and signals, showing that signal travels in the spaces, not the traces, of circuit boards Explains logic circuit behavior through real-time analysis involving the fields and waves that carry signal and energy Provides new information on how ground/power planes work Outlines a software program for solving energy flow in complex networks

Digital Electronics 1
CRC Press

DIGITAL LOGIC DESIGNBPB Publications
Digital Logic Circuits (As Per Anna University) John Wiley & Sons
Most branches of organizing utilize digital electronic systems. This book introduces the design of such systems using basic logic elements as the components. The material is presented in a straightforward manner suitable for students of electronic engineering and computer science. The book is also of use to engineers in related disciplines who require a

clear introduction to logic circuits. This third edition has been revised to encompass the most recent advances in technology as well as the latest trends in components and notation. It includes a wide coverage of application specific integrated circuits (ASICs), many worked examples and a step-by-step logical and practical approach.

Fundamentals and Applications of Digital Logic Circuits BPB Publications
This textbook covers

latest topics in the field of digital logic design along with tools to design the digital logic circuits. It is designed for the undergraduate students pursuing courses in areas of engineering disciplines such as Electrical and Electronics, Electronics and Communication, Electronics and Instrumentation, Telecommunications, and Computer Science and Engineering. It is also useful as a text for MCA, M.Sc. (Electronics) and M.Sc. (Computer Science) students. The contents of

this book have been organized in a systematic manner so as to inculcate sound knowledge and concepts amongst its readers. It covers basic concepts in combinational and sequential circuit design such as digital electronics, digital signal processing, number system, data and information representation and, computer arithmetic. Besides this, advanced topics in digital logic design such as various types of counter design, register design, ALU

design, threshold circuit and, digital computer design are also discussed in the book. Key features

- Question Bank containing numerous multiple choice questions with their answers
- Short answer questions, long answer questions and multiple choice questions at the end of each chapter
- Extensive use of graphs and diagrams for better understanding of the subject

[Electronic Logic Circuits](#)
McGraw-Hill Higher Education
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 Circuits From Basic Level: Digital Logic Circuits Pdf New Age International

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
Logic and Design
 DIGITAL LOGIC DESIGN
 The omnipresence of electronic devices in our everyday lives has been accompanied by the downscaling of chip feature sizes and the ever increasing complexity of digital circuits. This book is devoted to the analysis

and design of digital circuits, where the signal can assume only two possible logic levels. It deals with the basic principles and concepts of digital electronics. It addresses all aspects of combinational logic and provides a detailed understanding of logic gates that are the basic components in the implementation of circuits used to perform functions and operations of Boolean algebra. Combinational logic circuits are characterized by outputs that depend only on the

actual input values. Efficient techniques to derive logic equations are proposed together with methods of analysis and synthesis of combinational logic circuits. Each chapter is well structured and is supplemented by a selection of solved exercises covering logic design practices.

Digital Electronics: A Primer - Introductory Logic Circuit Design
Technical Publications
Digital Logic Design,
Second Edition provides a basic understanding of

digital logic design with emphasis on the two alternative methods of design available to the digital engineer. This book describes the digital design techniques, which have become increasingly important. Organized into 14 chapters, this edition begins with an overview of the essential laws of Boolean algebra, K-map plotting techniques, as well as the simplification of Boolean functions. This text then presents the properties and develops the characteristic equations of a number of

various types of flip-flop. Other chapters consider the design of synchronous and asynchronous counters using either discrete flip-flops or shift registers. This book discusses as well the design and implementation of event driven logic circuits using the NAND sequential equation. The final chapter deals with simple coding techniques and the principles of error detection and correction. This book is a valuable resource for undergraduate students,

digital engineers, and scientists.

Baby Steps: Intro to Computer Engineering

Pearson

Most branches of organizing utilize digital electronic systems. This book introduces the design of such systems using basic logic elements as the components. The material is presented in a straightforward manner suitable for students of electronic engineering and computer science. The book is also of use to engineers in related disciplines who require a

clear introduction to logic circuits. This third edition has been revised to encompass the most recent advances in technology as well as the latest trends in components and notation. It includes a wide coverage of application specific integrated circuits (ASICs), many worked examples and a step-by-step logical and practical approach.

Digital Logic Circuits

Elsevier

This practical introduction explains exactly how digital circuits are

designed, from the basic circuit to the advanced system. It covers combinational logic circuits, which collect logic signals, to sequential logic circuits, which embody time and memory to progress through sequences of states. The primer also highlights digital arithmetic and the integrated circuits that implement the logic functions. Based on the author's extensive experience in teaching digital electronics to undergraduates, the book translates theory directly

into practice and presents the essential information in a compact, digestible style. Worked problems and examples are accompanied by abbreviated solutions, with demonstrations to ensure that the design material and the circuits' operation are fully understood. This is essential reading for any electronic or electrical engineering student new to digital electronics and requiring a succinct yet comprehensive introduction.

Digital Logic Design

Morgan & Claypool
Publishers

The book is written for an undergraduate course on digital electronics. The book provides basic concepts, procedures and several relevant examples to 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, 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, 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.

Digital Logic Circuit
Analysis and Design Sree
kamalamani Publications

private limited
 An Introduction to Logic Circuit Testing provides a detailed coverage of techniques for test generation and testable design of digital electronic circuits/systems. The material covered in the book should be sufficient for a course, or part of a course, in digital circuit testing for senior-level undergraduate and first-year graduate students in Electrical Engineering and Computer Science. The book will also be a valuable resource for engineers working in the

industry. This book has four chapters. Chapter 1 deals with various types of faults that may occur in very large scale integration (VLSI)-based digital circuits. Chapter 2 introduces the major concepts of all test generation techniques such as redundancy, fault coverage, sensitization, and backtracking. Chapter 3 introduces the key concepts of testability, followed by some ad hoc design-for-testability rules that can be used to enhance testability of combinational circuits.

Chapter 4 deals with test generation and response evaluation techniques used in BIST (built-in self-test) schemes for VLSI chips. Table of Contents: Introduction / Fault Detection in Logic Circuits / Design for Testability / Built-in Self-Test / References
Digital Logic Design
 Springer
 An introduction to computer engineering for babies. Learn basic logic gates with hands on examples of buttons and an output LED.
Operation and Analysis

World Scientific Publishing Company

The third edition of Digital Logic Techniques provides a clear and comprehensive treatment of the representation of data, operations on data, combinational logic design, sequential logic, computer architecture, and practical digital circuits. A wealth of exercises and worked examples in each chapter give students valuable experience in applying the concepts and techniques discussed. Beginning with an objective comparison

between analogue and digital representation of data, the author presents the Boolean algebra framework for digital electronics, develops combinational logic design from first principles, and presents cellular logic as an alternative structure more relevant than canonical forms to VLSI implementation. He then addresses sequential logic design and develops a strategy for designing finite state machines, giving students a solid foundation for more

advanced studies in automata theory. The second half of the book focuses on the digital system as an entity. Here the author examines the implementation of logic systems in programmable hardware, outlines the specification of a system, explores arithmetic processors, and elucidates fault diagnosis. The final chapter examines the electrical properties of logic components, compares the different logic families, and highlights the problems that can

arise in constructing practical hardware systems.

DIGITAL LOGIC DESIGN

Hayden

This textbook introduces readers to the fundamental hardware used in modern computers. The only prerequisite is algebra, so it can be taken by college freshman or sophomore students or even used in Advanced Placement courses in high school. This book presents both the classical approach to digital system design (i.e., pen and paper) in addition

to the modern hardware description language (HDL) design approach (computer-based). This textbook enables readers to design digital systems using the modern HDL approach while ensuring they have a solid foundation of knowledge of the underlying hardware and theory of their designs. This book is designed to match the way the material is actually taught in the classroom. Topics are presented in a manner which builds foundational knowledge before moving

onto advanced topics. The author has designed the content with learning goals and assessment at its core. Each section addresses a specific learning outcome that the learner should be able to “do” after its completion. The concept checks and exercise problems provide a rich set of assessment tools to measure learner performance on each outcome. This book can be used for either a sequence of two courses consisting of an introduction to logic circuits (Chapters 1-7)

followed by logic design (Chapters 8-13) or a single, accelerated course that uses the early chapters as reference material.

Digital Logic Circuits

John Wiley & Sons

The omnipresence of electronic devices in our everyday lives has been accompanied by the downscaling of chip feature sizes and the ever increasing complexity of digital circuits. This book is devoted to the analysis and design of digital circuits, where the signal can assume only two

possible logic levels. It deals with the basic principles and concepts of digital electronics. It addresses all aspects of combinational logic and provides a detailed understanding of logic gates that are the basic components in the implementation of circuits used to perform functions and operations of Boolean algebra. Combinational logic circuits are characterized by outputs that depend only on the actual input values. Efficient techniques to derive logic equations are

proposed together with methods of analysis and synthesis of combinational logic circuits. Each chapter is well structured and is supplemented by a selection of solved exercises covering logic design practices.

Digital Circuits John Wiley & Sons

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 1Chapter 2 and 3 covers :-Unit 2Chapter 4 and 5 covers :-Unit 3Chapter 6 and 7 covers :- Unit 4Chapter 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, implementation of switching function using basic Logical Gates and Universal Gates. CHAPTER 3: Describes the

combinational circuits like Adder, Subtractor, Multiplier, Divider, magnitude comparator, encoder, decoder, code converters, Multiplexer and Demultiplexer. CHAPTER 4: Describes with Latches, Flip-Flops, Registers and Counters CHAPTER 5: Concentrates on the Analysis as well as design of synchronous sequential circuits, Design of synchronous counters, sequence generator and Sequence detector 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 7: Discussion on memory devices which 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, packagaes, 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.
Introduction to Logic

Circuits & Logic Design with VHDL Morgan & Claypool Publishers
Description: The book is an attempt to make Digital Logic Design easy and simple to understand. The book covers various features of Logic Design using lots of examples and relevant diagrams. The complete text is reviewed for its correctness. This book is an outcome of sincere effort and hard work to bring concepts of Digital Logic Design close to the audience of this book. The salient features of the

book:--Easy explanation of Digital System and Binary Numbers with lots of solved examples-Detailed covering of Boolean Algebra and Gate-Level Minimization with proper examples and diagrammatic - representation.-Detailed analysis of different Combinational Logic Circuits-Complete Synchronous sequential Logic understanding-Deep understanding of Memory and Programmable Logic-Detailed analysis of different Asynchronous Sequential Logic Table Of

Contents:Unit 1 : Digital System and Binary Numbers;Part 1: Digital System and Binary NumbersPart 2 : Boolean Algebra and Gate Level MinimizationUnit 2 : Combinational LogicUnit 3: Sequential CircuitsUnit 4 : Memory, Programmable Logic and DesignUnit 5 : Asynchronous Sequential Logic

Digital Electronic Circuits
Cambridge University Press
This book deals with key aspects of design of digital electronic circuits for different families of elementary electronic devices. Implementation of both simple and complex logic circuits are considered in detail, with special attention paid to

the design of digital systems based on complementary metal-oxide-semiconductor (CMOS) and Pass-Transistor Logic (PTL) technologies acceptable for use in planar microelectronics technology. It is written for students in electronics and microelectronics, with exercises and solutions provided.