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Computer, Network, Software, and Hardware Engineering with Applications-Norman F. Schneidewind 2012-03-27 There are many books on computers, networks, and software engineering but none that integrate the three with applications. Integration is important because, increasingly, software dominates the performance, reliability, maintainability, and availability of complex computer and systems. Books on software engineering typically portray software as if it exists in a vacuum with no relationship to the wider system. This is wrong because a system is more than software. It is comprised of people, organizations, processes, hardware, and software. All of these components must be considered in an integrative fashion when designing systems. On the other hand, books on computers and networks do not demonstrate a deep understanding of the intricacies of developing software. In this book you will learn, for example, how to quantitatively analyze the performance, reliability, maintainability, and availability of complex computer and systems. Furthermore, you will learn how to evaluate and mitage the risk of deploying integrated systems. You will learn how to apply many models dealing with the optimization of systems. Numerous quantitative examples are provided to help you understand and interpret model results. This book can be used as a first year graduate course in computer, network, and software engineering; as an on-the-job reference for computer, network, and software engineers; and as a reference for these disciplines.

PC Hardware: A Beginner’s Guide-Ron Gilster 2001-05-17 Ideal for PC owners looking for an accessible, easy-to-follow reference, this beginner’s guide to PC hardware offers expert advice on every component-processors, motherboards, memory, BIOS, CD-ROM and DVD drives, video cards, and much more. You’ll also get details on external devices, including monitors, printers, keyboards, and modems. The book covers both Intel and non-Intel CPUs and USB and AGP ports.

Computer Engineering-C. Gordon Bell 2014-05-12 Computer Engineering: A DEC View of Hardware Systems Design focuses on the principles, progress, and concepts in the design of hardware systems. The selection first elaborates on the seven views of computer systems, technology progress in logic and memories, and packaging and manufacturing. Concerns cover power supplies, DEC computer packaging generations, general packaging, semiconductor logic technology, memory technology, measuring (and creating) technology progress, structural levels of a computer system, and packaging levels-of -integration. The manuscript then examines transistor circuitry in the Lincoln TX-2, digital modules, PDP-1 and other 18-bit computers, PDP-8 and other 12-bit computers, and structural levels of the PDP-8. The text takes a look at cache memories for PDP-11 family computers, buses, DEC LSI-11, and design decisions for the PDP-11/60 mid-range minicomputer. Topics include reliability and maintainability, price/performance balance, advances in memory technology, synchronization of data transfers, error control strategies, PDP-11/45, PDP-11/20, and cache organization. The selection is a fine reference for practicing computer designers, users, programmers, designers of peripherals and memories, and students of computer engineering and computer science.

Code-Charles Petzold 2000-10-11 What do flashlights, the British invasion, black cats, and seesaws have to do with computers? In CODE, they show us the ingenious ways we manipulate language and invent new means of communicating with each other. And through CODE, we see how this ingenuity and our very human compulsion to communicate have driven the technological innovations of the past two centuries. Using everyday objects and familiar language systems such as Braille and Morse code, author Charles Petzold weaves an illuminating narrative for anyone who’s ever wondered about the secret inner life of computers and other smart machines. It’s a cleverly illustrated and eminently comprehensible story—and along the way, you’ll discover you’ve gained a real context for understanding today’s world of PCs, digital media, and the Internet. No matter what your level of technical savvy, CODE will charm you—and perhaps even awaken the technophile within.

The Computer Engineering Handbook-Vojin G. Oklobdzija 2001-12-26 There is arguably no field in greater need of a comprehensive handbook than computer engineering. The unparalleled rate of technological advancement, the explosion of computer applications, and the in-progress migration to a wireless world have made it difficult for engineers to keep up with all the developments in specialties outside their own

PC Hardware Engineering on My Pocket-Anto.Y 2012-05-06 “Valuable books can make up a valuable person” This book explains advanced components of hardware parts. All the internal components of motherboard are explained neatly. The comparison between existing and advanced processor are described. The usage of peripheral devices is given. Assembling the hardware parts of a new system are illustrated as a step by step procedure with neat snapshots after assembling the hardware parts booting the Operating system are also demonstrated. This book guides you to become a hardware engineer with in fifteen days so everyone must take this training kit. After reading this book you itself can gently say that “PC Hardware Engineering on My Pocket”

The Architecture of Computer Hardware, Systems Software, and Networking-Irv Englander 2021-04-06 The Architecture of Computer Hardware, Systems Software and Networking is designed help students majoring in information technology (IT) and information systems (IS) understand the structure and operation of computers and computer-based devices. Requiring only basic computer skills, this accessible textbook introduces the basic principles of system architecture and explores current technological practices and trends using clear, easy-to-understand language. Throughout the text, numerous relatable examples, subject-specific illustrations, and in-depth case studies reinforce key learning points and show students how important concepts are applied in the real world. This fully-updated sixth edition features a wealth of new and revised content that reflects today’s technological landscape. Organized into five parts, the book first explains the role of the computer in information systems and provides an overview of its components. Subsequent sections discuss the representation of data in the computer, hardware architecture and operational concepts, the basics of computer networking, system software and operating systems, and various interconnected systems and components. Students are introduced to the material using ideas already familiar to them, allowing them to gradually build upon what they have learned without being overwhelmed and develop a deeper knowledge of computer architecture.

Advances in Computers- 2017-02-21 Advances in Computers, the latest volume in the series published since 1960, presents detailed coverage of innovations in computer hardware, software, theory, design, and applications. In addition, it provides contributions with a medium in which they can explore their subjects in greater depth and breadth than journal articles usually allow. As a result, many articles have become standard references that continue to be of significant, lasting value in this rapidly expanding field. Provides in-depth surveys and tutorials on new computer technology Presents well-known authors and researchers in the field Contains extensive
heterogeneous computing. Whether you are a hardware designer or a software developer, you need to know how current heterogeneous systems, and what lies ahead. The aim of this book is to introduce the big picture of algorithms all the way to process technology. We discuss the topic of heterogeneous computing from different angles: hardware challenges, current hardware state-of-the-art, software issues, how to make the best use of the current heterogeneous systems, and what lies ahead. The aim of this book is to introduce the big picture of heterogeneous computing. Whether you are a hardware designer or a software developer, you need to know how the pieces of the puzzle fit together. The main goal is to bring researchers and engineers to the forefront of the research frontier in the new era that started a few years ago and is expected to continue for decades. We believe that academics, researchers, practitioners, and students will benefit from this book and will be prepared to tackle the big wave of heterogeneous computing that is here to stay.

Heterogeneous Computing
Mohamed Zahran 2019-05-29 If you look around you will find that all computer systems, from your portable devices to the strongest supercomputers, are heterogeneous in nature. The most obvious heterogeneity is the existence of computing nodes of different capabilities (e.g. multicore, GPUs, FPGAs, ...). But there are also other heterogeneity factors that exist in computing systems, like the memory system components, interconnection, etc. The main reason for these different types of heterogeneity is to have good performance with power efficiency. Heterogeneous computing results in both challenges and opportunities. This book discusses both. It shows that we need to deal with these challenges at all levels of the computing stack: from algorithms all the way to process technology. We discuss the topic of heterogeneous computing from different angles: hardware challenges, current hardware state-of-the-art, software issues, how to make the best use of the current heterogeneous systems, and what lies ahead. The aim of this book is to introduce the big picture of heterogeneous computing. Whether you are a hardware designer or a software developer, you need to know how the pieces of the puzzle fit together. The main goal is to bring researchers and engineers to the forefront of the research frontier in the new era that started a few years ago and is expected to continue for decades. We believe that academics, researchers, practitioners, and students will benefit from this book and will be prepared to tackle the big wave of heterogeneous computing that is here to stay.

Computer Organization and Design
David A. Patterson 2004-08-07 This best selling text on computer organization has been thoroughly updated to reflect the newest technologies. Examples highlight the latest processor designs, benchmarking standards, languages and tools. As with previous editions, a MIPS processor is the core used to present the fundamentals of hardware technologies at work in a computer system. The book presents an entire MIPS instruction set—instruction by instruction—the fundamentals of assembly language, computer arithmetic, pipelining, memory hierarchies and I/O. A new aspect of the third edition is the explicit connection between program performance and CPU performance. Throughout the book a new feature focusing on program performance describes how to search for bottlenecks and improve performance in various parts of the system. The book digs deeper into the hardware/software interface, presenting a complete view of the function of the programming language and compiler—crucial for understanding computer organization. A CD provides a toolkit of simulators and compilers along with tutorials for using them. For instructor resources please click on the grey “compansion site” button found on the right side of this page. This new edition represents a major revision. New to this edition: * Entire Text has been updated to reflect new technology * 70% new exercises. * Includes a CD loaded with software, projects and exercises to support courses using a number of tools * A new interior design presents defined terms in the margin for quick reference * A new feature, “Understanding Program Performance” focuses on performance from the programmer’s perspective * Two sets of exercises and solutions, “For More Practice” and “In More Depth,” are included on the CD * “Check Yourself” questions help students check their understanding of major concepts * Computers In the Real World feature illustrates the diversity of uses for information technology * More detail below...
Hardware Security-Swarup Bhunia 2018-10-30 Hardware Security: A Hands-On Learning Approach provides a broad, comprehensive and practical overview of hardware security that encompasses all levels of the electronic hardware infrastructure. It covers basic concepts like advanced attack techniques and countermeasures that are illustrated through theory, case studies and well-designed, hands-on laboratory exercises for each key concept. The book is ideal as a textbook for upper-level undergraduate students studying computer engineering, computer science, electrical engineering, and biomedical engineering, but is also a handy reference for graduate students, researchers and industry professionals. For academic courses, the book contains a robust suite of teaching ancillaries. Users will be able to access schematic, layout and design files for a printed circuit board for hardware hacking (i.e. the HaHa board) that can be used by instructors to fabricate boards, a suite of videos that demonstrate different hardware vulnerabilities, hardware attacks and countermeasures, and a detailed description and user manual for companion materials. Provides a thorough overview of computer hardware, including the fundamentals of computer systems and the implications of security risks includes discussion of the liability, ownership and privacy implications of hardware and software security and interaction. Gives insights on a wide range of security, trust issues and emerging attacks and protection mechanisms in the electronic hardware lifecycle, from design, fabrication, test, and distribution, straight through to supply chain and deployment in the field.

Hardware and Computer Organization-Arnold S. Berger 2005-06-08 Hardware and Computer Organization is a practical introduction to the architecture of modern microprocessors. This book from the bestselling author explains how PCs work and how to make them work for you. It is designed to take students “under the hood” of a PC and provide them with an understanding of the complex machine that has become such a pervasive part of everyday life. It clearly explains how hardware and software cooperatively interact to accomplish real-world tasks. Unlike other textbooks on this topic, Dr. Berger’s book takes the software developer’s point-of-view. Instead of simply demonstrating how to design a computer’s hardware, it provides an understanding of the total machine, highlighting strengths and weaknesses, explaining how to deal with memory and how to write efficient assembly code that interacts directly with, and takes best advantage of the underlying hardware. The book is divided into three major sections: Part 1 covers hardware and computer fundamentals, including logical gates and simple digital design. Elements of hardware development such as instruction set architecture, memory and I/O organization and analog to digital conversion are examined in detail, within the context of modern operating systems. Part 2 discusses the software at the lowest level, assembly language, while Part 3 introduces the reader to modern computer architectures and reflects on future trends in reconfigurable hardware. This book is an ideal reference for ECE/software engineering students as well as embedded systems designers, professional engineers needing to understand the fundamentals of computer hardware, and hobbyists. The renowned author’s many years in industry provide an excellent basis for the inclusion of extensive real-world references and insights. Several modern processor architectures are covered, with examples taken from each, including Intel, Motorola, MIPS, and ARM.

Introduction to Computer Engineering-Taylor L. Booth 1984 A one-semester, undergraduate course stressing the use of information transfer concepts necessary to analysis and design of modern digital systems. It is organized to provide an integrated overview of the various classes of digital information-processing systems and devices and the interrelationship between the hardware and software techniques that can be used to solve problems.

Microsoft Excel 2010 In Depth-Bill Jelen 2010 In Depth is the beyond-the-basics, beneath-the-surface guide for everyone who wants to streamline their work with Excel 2010, and get more done in less time. Legendary Excel expert Bill Jelen provides specific, tested, proven solutions to the problems Excel users run into every day: legendary other books ignore or oversimplify. Jelen thoroughly covers all facets of working with Excel 2010, and adds new chapters on Excel Web App which allows multiple users to edit a spreadsheet simultaneously. New content also includes: Slicer, which offers dynamic filtering of PivotTables, Sparklines, which add data visualization to any cell; Calculation engine which improves the speed and accuracy of math, financial, and statistical functions; and the new version of Solver. As with all In Depth books, Excel 2010 In Depth presents comprehensive coverage, breakthrough techniques, exclusive shortcuts, quick access to information, troubleshooting help for tough problems, and real-world examples with nothing glossed over or left out. Step-by-step instructions with icons guide readers through essential tasks such as designing tables, entering data, importing external data, designing and executing queries, and designing data entry forms and printed reports. Additional chapters on advanced form and report design emphasize data entry efficiency and presentation clarity. By Bill Jelen, aka MrExcel, an Excel MVP and the principal behind the leading Excel website, MrExcel.com Covers all aspects of working with Excel 2010, from its updated Ribbon interface to its breakthrough collaboration and improved business intelligence. For everyone who wants to get the most out of Excel 2010, from casual users to corporate professionals.

Computer Electronics-J. F. Bourdillon 2014-05-21 Computer Electronics: Made Simple Computerbooks presents the basics of computer electronics and explains how a microprocessor works. Various types of PROMs, static RAMs, dynamic RAMs, floppy disks, and hard disks are considered, along with microprocessor support devices made by Intel, Motorola and Zilog. Bit slice logic and some AMD bit slice products are also described. Comprised of 14 chapters, this book begins with an introduction to the fundamentals of hardware design, followed by a discussion on the basic building blocks of hardware (NAND, NOR, AND, OR, NOT, XOR); tools and equipment that are required by a hardware engineer; and sequential logic. Subsequent chapters focus on analog components such as transistors, resistors, capacitors, diodes, crystals, and power supplies; data sheets and data books; timing diagrams; arithmetic using integrated circuits, with emphasis on full adders, arithmetic logic units, and arithmetic processing units. The final chapter describes how a project operates, how the computer-aided design process works, and how printed circuit boards are manufactured. This monograph will be of interest to students, engineers, and other practitioners in computer electronics.

Build a Computer from Scratch-Jeff Heaton 2006-06-01 Building a computer system lets users get exactly the computer system that they need. This book takes them through all of the steps to create a powerful computer system. Includes 120+ photographs to guide readers through the process. (Computer Books)

Complete A+ Guide to IT Hardware and Software Lab Manual-Cheryl A. Schmidt 2019-05-20 The companion Complete A+ Guide to IT Hardware and Software Lab Manual provides students hands-on practice with various computer parts, mobile devices, wired networking, wireless networking, operating systems, and security. The 155 labs are designed in a step-by-step manner that allows students to experiment with various technologies and answer questions along the way to consider the steps being taken. Some labs include challenge areas to further practice the new concepts. The labs ensure students gain the experience and confidence required to succeed in industry.

Computer Organization and Design Fundamentals-David L. Tarnoff 2007 Computer Organization and Design Fundamentals takes the reader from the basic design principles of the modern digital computer to a top-level examination of the architecture of modern processor systems. This book can serve as an introductory text on computer hardware or as the basic text for the aspiring architect who wants to learn about digital design. The material is presented in four parts. The first part describes how computers represent and manipulate numbers. The second part presents the tools used at all levels of binary design. The third part introduces the reader to computer system theory with topics such as memory, caches, hard drives, pipelining, and interrupts. The last part applies these theories through an introduction to the Intel 80x86 architecture and assembly language. The material is presented using practical terms and examples with an aim toward providing anyone who works with computer systems the ability to use them more effectively through a better understanding of their design.

Foundations of Computer Technology-Alexander John Anderson 2020-10-26 Foundations of Computer Technology is an easily accessible introduction to the architecture of computers and peripherals. This textbook clearly and completely explains modern computer systems through an approach that integrates components, systems, software, and design. It provides a succinct, systematic, and readable guide to computers, providing a springboard for students to pursue more detailed technology subjects. This volume focuses on hardware elements within a computer system and the impact of software on its architecture. It discusses practical aspects of...
computer organization (structure, behavior, and design) delivering the necessary fundamentals for electrical engineering and computer science students. The book not only lists a wide range of terms, but also explains the basic operations of components within a system, aided by many detailed illustrations. Material on modern technologies is combined with a historical perspective, delivering a range of articles on hardware, architecture, and software, programming methodologies, and the nature of operating systems. It also includes a unified treatment on the entire computing spectrum, ranging from microcomputers to supercomputers. Each section features learning objectives and chapter outlines. Small glossary entries define technical terms and each chapter ends with an alphabetical list of key terms for reference and review. Review questions also appear at the end of each chapter and project questions inspire readers to research beyond the text. Short, annotated bibliographies direct students to additional useful reading.

Principles of Computer System Design-Jerome H. Saltzer 2009-05-21 Principles of Computer System Design is the first textbook to take a principles-based approach to the computer system design. It identifies, examines, and illustrates fundamental concepts in computer system design that are common across operating systems, networks, database systems, distributed systems, programming languages, software engineering, security, fault tolerance, and architecture. Through carefully analyzed case studies from each of these disciplines, it demonstrates how to apply these concepts to tackle practical system design problems. To support the focus on design, the text identifies and explains abstractions that have proven successful in practice such as remote procedure call, client/service organization, file systems, data integrity, consistency, and authenticated messages. Most computer systems are built using a handful of such abstractions. The text describes how these abstractions are implemented, demonstrates how they are used in different systems, and prepares the reader to apply them in future designs. The book is recommended for junior and senior undergraduate students in Operating Systems, Distributed Systems, Distributed Operating Systems and/or Computer Systems Design courses, and professional computer systems designers. Features: Concepts of computer systems architecture. Numerous pseudocode fragments that provide concrete examples of abstractions. Cross-cutting approach that identifies abstractions common to networking, operating systems, transaction systems, distributed systems, architecture, and software engineering. Case studies that make the abstractions real: naming (DNS and the URL); file systems (the UNIX file system); clients and services (NFS); virtualization (virtual machines); scheduling (disk arms); security (TLS). Numerous pseudocode fragments that provide concrete examples of abstractions. Extensive support. The authors and MIT OpCourseWare provide online, free of charge, open educational resources, including additional chapters, course syllabi, board layouts and slides, lecture videos, and an archive of lecture schedules, class assignments, and design projects.

Microprocessor Systems-1995-11-11

A First Course in Electrical and Computer Engineering-Louis L. Scharf 1990

Digital Systems Engineering-William J. Daily 2008-04-24 What makes some computers slow? Why do some digital systems operate reliably for years while others fail mysteriously every few hours? How can some systems dissipate kilowatts while others operate off batteries? These questions of speed, reliability, and power are all determined by the system-level electrical design of a digital system. Digital Systems Engineering presents a comprehensive treatment of these topics. It combines a rigorous development of the fundamental principles in each area with real-world examples of circuits and methods. The book not only serves as an undergraduate textbook, filling the gap between circuit design and logic design, but can also help practicing digital designers keep pace with the speed and power of modern integrated circuits. The techniques described in this book, once used exclusively in supercomputers, are essential to the correct and efficient operation of any type of digital system.

Understanding Personal Computer Hardware-Steven Roman 1998-07-31 This book is for PC users who want to make more intelligent buying and upgrading decisions, or who would simply like to understand how their PCs work. If a picture book is not enough for you, but you don’t have a degree in computer science or engineering, then this book is for you. In addition to carefully crafted explanations by a noted author, this book contains over 150 carefully drawn illustrations.

Computer Science-Edward K. Blum 2011-12-02 Computer Science: The Hardware, Software and Heart of It focuses on the deeper aspects of the two recognized subdivisions of Computer Science, Software and Hardware. These subdivisions are shown to be closely interrelated as a result of the stored-program concept. Computer Science: The Hardware, Software and Heart of It includes certain classical theoretical computer science topics such as Unsolvability (e.g. the halting problem) and Undecidability (e.g. Gödel’s incompleteness theorem) that treat problems that are too hard for any generation of computers. These problems also lead to a consideration of future quantum computers and a possible escape from the Church-Turing thesis to a new computation paradigm. The book’s historical context is especially helpful during this, the centenary of Turing’s birth. Alan Turing is widely regarded as the father of Computer Science, since many concepts in both the hardware and software of Computer Science can be traced to his pioneering research. Turing was a multi-faceted mathematician-engineer and was able to work on both concrete and abstract levels. This book shows how these two seemingly disparate aspects of Computer Science are intimately related. Further, the book treats the historical side of Computer Science as well, which also derives from Turing’s research. Computer Science: The Hardware, Software and Heart of It is designed as a professional book for practitioners and researchers working in the related fields of Quantum Computing, Cloud Computing, Computer Networking, as well as non-scientist users. Advanced-level and undergraduate students concentrating on computer science, engineering and mathematics will also find this book useful.

Onboard Computers, Onboard Software and Satellite Operations-Jens Eickhoff 2011-11-16 This book is intended as a system engineer’s compendium, explaining the dependencies and technical interactions between the onboard computer hardware, the onboard software and the spacecraft operations from ground. After a brief introduction on the subsequent development in all three fields over the spacecraft engineering phases each of the main topics is treated in depth in a separate part. The features of today’s onboard computers are explained at hand of their historic evolution over the decades from the early days of spaceflight up to today. Latest system-on-chip processor architectures are treated as well as all onboard computer major components. After the onboard computer hardware the corresponding software is treated in a separate part. Both the software static architecture as well as the dynamic architecture are covered, and development technologies as well as software verification approaches are included. Following these two parts on the onboard architecture, the last part covers the concepts of spacecraft operations from ground. This includes the nominal operations concepts, the redundancy concept and the topic of failure detection, isolation and recovery. The baseline examples in the book are taken from the domain of satellites and deep space probes. The principles and many cited standards on spacecraft commanding, hardware and software however also apply to other space applications like launchers. The book is equally applicable for students as well for system engineers in space industry.

Making Embedded Systems-Elecia White 2011-10-25 Interested in developing embedded systems? Since they don’t tolerate inefficiency, these systems require a disciplined approach to programming. This easy-to-read guide helps you cultivate a host of good development practices, based on classic software design patterns and new patterns unique to embedded programming. Learn how to build system architecture for processors, not operating systems, and discover specific techniques for dealing with hardware difficulties and manufacturing requirements. Written by an expert who’s created embedded systems ranging from urban surveillance and DNA scanners to children’s toys, this book is ideal for intermediate and experienced programmers, no matter what platform you use. Optimize your system to reduce cost and increase performance Develop an architecture that makes your software units Explode hardware and software components, and embed them in hardware and software components to make systems hardware and software with less: reduce RAM consumption, code space, processor cycles, and power consumption Learn how to update embedded code directly in the processor Discover how to implement complex mathematics on small processors Understand what interviewers look for when you apply for an embedded systems job “Making Embedded Systems
Microcontrollers and Microcomputers—Fredrick M. Cady 2010 Microcontrollers and Microcomputers: Principles of Software and Hardware Engineering, Second Edition, is an ideal introductory text for an embedded system or microcontroller course. While most texts discuss only one specific microcontroller, this book offers a unique approach by covering the common ground among all microcontrollers in one volume. Since the text does not focus on a particular processor, it can be used with processor-specific material—such as manufacturer's data sheets and reference manuals—or with texts, including author Fredrick M. Cady's Software and Hardware Engineering: Motorola M68HC11 or Software and Hardware Engineering: Motorola M68HC12. Now fully updated, the second edition covers the fundamental operation of standard microcontroller features, including parallel and serial I/O interfaces, interrupts, analog-to-digital conversion, and timers, focusing on the electrical interfaces as needed. It devotes one chapter to showing how a variety of devices can be used, and emphasizes C program software development, design, and debugging.

The Indispensable PC Hardware Book—Hans-Peter Messmer 1995 The definitive guide to PC hardware powers up for new platforms. This new edition continues to give programmers and design engineers a one-stop source for detailed explanations of how the different elements of a PC work individually and in concert.

Computer Systems: An Embedded Approach—Ian McLoughlin 2018-07-14 Incorporate embedded computing technology in projects and devices of all sizes This comprehensive engineering textbook lays out foundational computer architecture principles and teaches, step by step, how to apply those concepts in cutting-edge embedded applications. The book includes everything you need to know about embedded computing—from fundamentals and processor internals to networking and connectivity. Computer Systems: An Embedded Approach begins by thoroughly explaining constituent hardware components, including processors, storage devices, and accelerators. From there, the book shows how operating systems work and how they provide a layer of services between hardware and software. You will get coverage of foundational networking, pervasive computing concepts, and the Internet of Things (IoT). The book concludes with a look to the future of embedded computing systems. •This single resource takes readers right up to being ready to learn programming•Covers code aspects from the IEEE, POSIX, and OSI models •Written by a recognized academic and experienced author

Hardware Accelerator Systems for Artificial Intelligence and Machine Learning—2021-03-28 Hardware Accelerator Systems for Artificial Intelligence and Machine Learning, Volume 122 delves into artificial Intelligence and the growth it has seen with the advent of Deep Neural Networks (DNNs) and Machine Learning. Updates in this release include chapters on Hardware accelerator systems for artificial intelligence and machine learning, introduction to Hardware Accelerator Systems for Artificial Intelligence and Machine Learning, Deep Learning with GPUs, Edge Computing Optimization of Deep Learning Models for Specialized Tensor Processing Architectures, Architecture of NPU for DNN, Hardware Architecture for Convolutional Neural Networks for Image Processing, FPGA based Neural Network Accelerators, and much more. Updates on new information on the architecture of GPU, NPU and DNN Discusses In-memory computing, Machine intelligence and Quantum computing Includes sections on Hardware Accelerator Systems to improve processing efficiency and performance. The Hardware Hacker—Andrew Bunnie Huang 2019-08-27 For over a decade, Andrew “bunnie” Huang, one of the world’s most esteemed hackers, has shaped the fields of hacking and hardware, from his cult-classic book Hacking the Xbox to the open-source laptop Novena and his mentorship of various hardware startups and developers. In The Hardware Hacker, Huang shares his experiences in manufacturing and open hardware, creating an illuminating and compelling career retrospective. Huang’s journey starts with his first visit to the staggering electronics markets in Shenzhen, with booths overflowing with capacitors, memory chips, voltmeters, and possibility. He shares how he navigated the overwhelming world of Chinese factories to bring Chumby, Novena, and ChibiTronics to life, covering everything from creating a Bill of Materials to choosing the factory to best fit his needs. Through this collection of personal essays and interviews on topics ranging from the legality of reverse engineering to a comparison of intellectual property practices between China and the United States, bunnie weaves engineering, law, and society into the tapestry of open hardware. With highly detailed passages on the ins and outs of manufacturing and a comprehensive take on the issues associated with open source hardware, The Hardware Hacker is an invaluable resource for aspiring hackers and makers.

Ibm Pc And Clones: Hardware, Troubleshooting And Maintenance (Book + Cd)—Govindarajulu 2002-01-01 Detailed coverage of hardware circuits, software concepts and interfaces, test equipments and diagnostic aids; complete hardware design at the systems and components level of an IBM PC and its clones; common problems with their detailed troubleshooting procedure; practical tips for troubleshooting and quick diagnosis; systematic analysis of the POST sequence.CD includes: Video on PC Assembling: Step-by-step procedure of assembling a PC (supplement to Chapter 13), followed by a live demonstration; Anti-Virus software: Trial version of Vx2000 plus an antivirus package from K7 COMPUTING.

PCs For Dummies—Dan Gookin 2009-10-13 Get the latest edition of the bestselling PC book on the planet! What better way to make friends with your new PC than with this new edition of the bestselling PC book in the world? PCs For Dummies, Windows 7 Edition explains the latest Windows operating system in a refreshingly jargon-free way that's loaded with good humor and great help. Discover how to make your PC safe for your kids, get in touch with your digital life, use flash drives, learn about green computing, and much more. Dan Gookin, author of the original DOS For Dummies, helped launch the worldwide popularity of the series; his books have been translated in 32 languages and have more than 12 million copies in print This guide gets you up to speed on the latest PC hardware and software and covers all the innovations and changes in Windows 7, all without the boring jargon Covers making your PC safe for kids, organizing your digital life, green computing, storage on memory cards and flash drives, online photo sharing, and much more. Make your life easier the Dummies way with PCs For Dummies, Windows 7 Edition.