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Programming and Interfacing with Arduino - Yogesh Misra 2021-09-06

Programming and Interfacing with Arduino provides an in-depth understanding of the Arduino UNO board. It covers programming concepts, working and interfacing of sensors, input/output devices, communication modules, and actuators with Arduino UNO board. This book contains a large number of programming examples along with the description and interfacing details of hardware with Arduino UNO board. It discusses important topics, including SPI communication protocol, I2C communication protocol, light-emitting diode, potentiometer, analog-to-digital converter, pulse width modulation, temperature sensor LM35, humidity and temperature sensor DHT11, motor driver L293D, LED interfacing and programming, and push-button interfacing and programming. Aimed at senior undergraduate students and professionals in areas such as electrical engineering, electronics, and communication engineering, this text: Discusses construction and working of sensors, including ultrasonic sensor, temperature sensor, and optical sensor. Covers construction, working, programming, and interfacing of IO devices. Discusses programming, interfacing construction, and working of relay with the Arduino board for controlling high-voltage devices. Covers interfacing diagram of devices with the Arduino board. Provides videos demonstrating the implementation of programs on the Arduino board.

NASA Tech Briefs - 1999

Digital Systems Design with FPGAs and CPLDs - Ian Grout 2011-04-08

Digital Systems Design with FPGAs and CPLDs explains how to design and develop digital electronic systems using programmable logic devices (PLDs). Totally practical in nature, the book features numerous (quantify when known) case study designs using a variety of Field Programmable Gate Array (FPGA) and Complex Programmable Logic Devices (CPLD), for a range of applications from control and instrumentation to semiconductor automatic test equipment. Key features include: * Case studies that provide a walk through of the design process, highlighting the trade-offs involved. * Discussion of real world issues such as choice of device, pin-out, power supply, power supply decoupling, signal integrity- for embedding FPGAs within a PCB based design. With this book engineers will be able to: * Use PLD technology to develop digital and mixed signal electronic systems * Develop PLD based designs using both schematic capture and VHDL synthesis techniques * Interface a PLD to digital and mixed-signal systems * Undertake complete design exercises from design concept through to the build and test of PLD based electronic hardware This book will be ideal for electronic and computer engineering students taking a practical or Lab based course on digital systems development using PLDs and for engineers in industry looking for concrete advice on developing a digital system using a FPGA or CPLD as its core. Case studies that provide a walk through of the design process, highlighting the trade-offs involved. Discussion of real world issues such as choice of device, pin-out, power supply, power supply decoupling, signal integrity- for embedding FPGAs within a PCB based design.

Introduction to Electromagnetic Compatibility - Clayton R. Paul 2022-11-01

INTRODUCTION TO ELECTROMAGNETIC COMPATIBILITY The revised new edition of the classic textbook is an essential resource for anyone working with today's advancements in both digital and analog devices, communications systems, as well as power/energy generation and distribution. Introduction to Electromagnetic Compatibility provides thorough coverage of the techniques and methodologies used to design and analyze electronic systems that function acceptably in their electromagnetic environment. Assuming no prior familiarity with electromagnetic compatibility, this user-friendly textbook first explains fundamental EMC concepts and technologies before moving on to more

advanced topics in EMC system design. This third edition reflects the results of an extensive detailed review of the entire second edition, embracing and maintaining the content that has "stood the test of time", such as from the theory of electromagnetic phenomena and associated mathematics, to the practical background information on U.S. and international regulatory requirements. In addition to converting Dr. Paul's original SPICE exercises to contemporary utilization of LTSPICE, there is new chapter material on antenna modeling and simulation. This edition will continue to provide invaluable information on computer modeling for EMC, circuit board and system-level EMC design, EMC test practices, EMC measurement procedures and equipment, and more such as: Features fully-worked examples, topic reviews, self-assessment questions, end-of-chapter exercises, and numerous high-quality images and illustrations Contains useful appendices of phasor analysis methods, electromagnetic field equations and waves. The ideal textbook for university courses on EMC, Introduction to Electromagnetic Compatibility, Third Edition is also an invaluable reference for practicing electrical engineers dealing with interference issues or those wanting to learn more about electromagnetic compatibility to become better product designers.

Right the First Time - Lee W. Ritchey 2003

Complete PCB Design Using OrCAD Capture and PCB Editor - Kraig Mitzner 2009-05-28

This book provides instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. The primary goal is to show the reader how to design a PCB using OrCAD Capture and OrCAD Editor. Capture is used to build the schematic diagram of the circuit, and Editor is used to design the circuit board so that it can be manufactured. The book is written for both students and practicing engineers who need in-depth instruction on how to use the software, and who need background knowledge of the PCB design process. Beginning to end coverage of the printed circuit board design process. Information is presented in the exact order a circuit and PCB are designed Over 400 full color illustrations, including extensive use of screen shots from the software, allow readers to learn features of the product in the most realistic manner possible Straightforward, realistic examples present the how and why the designs work, providing a comprehensive toolset for understanding the OrCAD software Introduces and follows IEEE, IPC, and JEDEC industry standards for PCB design. Unique chapter on Design for Manufacture covers padstack and footprint design, and component placement, for the design of manufacturable PCB's FREE CD containing the OrCAD demo version and design files

Complete PCB Design Using OrCad Capture and Layout - Kraig Mitzner 2011-04-01

Complete PCB Design Using OrCad Capture and Layout provides instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. The book is written for both students and practicing engineers who need a quick tutorial on how to use the software and who need in-depth knowledge of the capabilities and limitations of the software package. There are two goals the book aims to reach: The primary goal is to show the reader how to design a PCB using OrCAD Capture and OrCAD Layout. Capture is used to build the schematic diagram of the circuit, and Layout is used to design the circuit board so that it can be manufactured. The secondary goal is to show the reader how to add PSpice simulation capabilities to the design, and how to develop custom schematic parts, footprints and PSpice models. Often times separate designs are produced for documentation, simulation and board fabrication. This book shows how to perform all three functions from the same schematic design. This approach saves time and money and ensures continuity between the design and the manufactured product. Information is presented in the exact order a circuit and PCB are designed Straightforward, realistic examples present the how and why the

designs work, providing a comprehensive toolset for understanding the OrCAD software Introduction to the IPC, JEDEC, and IEEE standards relating to PCB design Full-color interior and extensive illustrations allow readers to learn features of the product in the most realistic manner possible

Electronic Experiences in a Virtual Lab - Roberto Gastaldi 2020-05-11

This book presents a collection of "lessons" on various topics commonly encountered in electronic circuit design, including some basic circuits and some complex electronic circuits, which it uses as vehicles to explain the basic circuits they are composed of. The circuits considered include a linear amplifier, oscillators, counters, a digital clock, power supplies, a heartbeat detector, a sound equalizer, an audio power amplifier and a radio. The theoretical analysis has been deliberately kept to a minimum, in order to dedicate more time to a "learning by doing" approach, which, after a brief review of the theory, readers are encouraged to use directly with a simulator tool to examine the operation of circuits in a "virtual laboratory." Though the book is not a theory textbook, readers should be familiar with the basic principles of electronic design, and with spice-like simulation tools. To help with the latter aspect, one chapter is dedicated to the basic functions and commands of the OrCad P-spice simulator used for the experiments described in the book.

Electronics for You, March 2015 - EFY Enterprises Pvt Ltd 2015-06-24

The demand for electronics wearables is increasing everyday and so is their variety. The latest issue of Electronics For You brings to you the list of amazing wearables along with the information to select your own smartwatch and a modern multimeter. It will also help you to use the new style of scopes and will guide you about the SMT equipments.

The Printed Circuit Designer's Guide To... Secrets of High-Speed PCBs - Polar Instruments 2017-06-20

This book is a compilation of columns written by Martyn Gaudion, CEO of Polar Instruments, for 'The PCB Design Magazine' over several years. Martyn examines complex signal integrity challenges, modelling and measurement issues, transmission line theory as well as the effects of glass weave on signal integrity. Martyn also touches on the issues of laminate loss, differential insertion loss, impedance control and modelled vs. measured results.

Inside OrCAD Capture for Windows - Chris Schroeder 1998-08-24

Inside OrCAD Capture for Windows is a reference manual and tutorial for engineers and technicians who use OrCAD as an engineering design assistance (EDA) tool. This introduction to OrCAD is designed to give easy access to practical information. Important subjects, such as export of schematic data for use in circuit analysis or PCB design, are expanded well beyond the information available in OrCAD's documentation. The command reference is a complete listing and explanation of the OrCAD commands and functions. A series of appendices provide important tips and techniques and information about linking OrCAD to other CAD/CAE tools used in the electronics design process. A utilities disk is included. Exercises at the end of each chapter make this book appropriate for academic use. The accompanying disk contains a parts library for the tutorial exercises and several useful utilities such as a bill of material sort, making this book a valuable tool for the design engineer or engineering student. Detailed tutorial OrCAD Capture for Windows is supported on Windows 3.1, 95, and NT Tips and techniques for design engineers

Electronic Design - 2007

Digital Logic Design - Brian Holdsworth 2002-11-01

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

Electric Drives and Electromechanical Systems - Richard Crowder 2019-10-19

Electric Drives and Electromechanical Devices: Applications and Control, Second Edition, presents a unified approach to the design and application of modern drive system. It explores problems involved in assembling complete, modern electric drive systems involving mechanical, electrical, and electronic elements. This book provides a global overview of design, specification applications, important design information, and methodologies. This new edition has been restructured to present a seamless, logical discussion on a wide range of topical problems relating to the design and specification of the complete motor-drive system. It is

organised to establish immediate solutions to specific application problem. Subsidiary issues that have a considerable impact on the overall performance and reliability, including environmental protection and costs, energy efficiency, and cyber security, are also considered. Presents a comprehensive consideration of electromechanical systems with insights into the complete drive system, including required sensors and mechanical components Features in-depth discussion of control schemes, particularly focusing on practical operation Includes extensive references to modern application domains and real-world case studies, such as electric vehicles Considers the cyber aspects of drives, including networking and security

EDN - 2009

SPICE for Power Electronics and Electric Power - Muhammad H. Rashid 2005-11-02

To be accredited, a power electronics course should cover a significant amount of design content and include extensive use of computer-aided analysis with simulation tools such as SPICE. Based upon the authors' experience in designing such courses, SPICE for Power Electronics and Electric Power, Second Edition integrates a SPICE simulator with a po

Structural Health Monitoring 2006 - Alfredo Güemes 2006

These proceedings of the Third European Workshop on Structural Health Monitoring held at the Conference Centre in Granada, Spain, in July of 2006 includes four keynote presentations and 170 technical papers written by an international group of contributors. Papers discuss technology and activities related to damage detection and evaluation in engine

IC Master - 1990

Electronic Product Design - SD Mehta 2011

This is an exciting career path which thousands of engineers get attracted to readily. This book shall enable the readers to familiarise themselves with the basics of PCB Design- an integral part of the product design cycle. This book is the first in the series of books that have been planned on electronic product design is done from an industry perspective. PCB designing is an exciting career prospect for the budding engineer and this book shall enables you to become one. This book is not meant to be just a textbook but also as a ready reckoner for PCB design enegineers.

Analog Design and Simulation using OrCAD Capture and PSpice - Dennis Fitzpatrick 2011-09-28

Analog Design and Simulation using OrCAD Capture and PSpice provides step-by-step instructions on how to use the Cadence/OrCAD family of Electronic Design Automation software for analog design and simulation. Organized into 22 chapters, each with exercises at the end, it explains how to start Capture and set up the project type and libraries for PSpice simulation. It also covers the use of AC analysis to calculate the frequency and phase response of a circuit and DC analysis to calculate the circuits bias point over a range of values. The book describes a parametric sweep, which involves sweeping a parameter through a range of values, along with the use of Stimulus Editor to define transient analog and digital sources. It also examines the failure of simulations due to circuit errors and missing or incorrect parameters, and discusses the use of Monte Carlo analysis to estimate the response of a circuit when device model parameters are randomly varied between specified tolerance limits according to a specified statistical distribution. Other chapters focus on the use of worst-case analysis to identify the most critical components that will affect circuit performance, how to add and create PSpice models, and how the frequency-related signal and dispersion losses of transmission lines affect the signal integrity of high-speed signals via the transmission lines. Practitioners, researchers, and those interested in using the Cadence/OrCAD professional simulation software to design and analyze electronic circuits will find the information, methods, compounds, and experiments described in this book extremely useful. Provides both a comprehensive user guide, and a detailed overview of simulation Each chapter has worked and ready to try sample designs and provides a wide range of to-do exercises Core skills are developed using a running case study circuit Covers Capture and PSpice together for the first time

Electronic Business - 2006

The management magazine for the electronics industry.

Basic Engineering Circuit Analysis - J. David Irwin 2006-05-05

Cadence® OrCAD® PCB designer OrCAD® PSpice - 2010

Electronics World + Wireless World - 1992

[I-Bytes Technology Industry](#) - IT Shades 2020-10-13

This document brings together a set of latest data points and publicly available information relevant for Technology Industry. We are very excited to share this content and believe that readers will benefit from this periodic publication immensely.

[Signal and Power Integrity--simplified](#) - Eric Bogatin 2010

With the inclusion of the two new hot topics in signal integrity, power integrity and high speed serial links, this book will be the most up to date complete guide to understanding and designing for signal integrity.

Designing Analog Chips - Hans Camenzind 2005

A comprehensive introduction to CMOS and bipolar analog IC design. The book presumes no prior knowledge of linear design, making it comprehensible to engineers with a non-analog back-ground. The emphasis is on practical design, covering the entire field with hundreds of examples to explain the choices. Concepts are presented following the history of their discovery. Content: 1. Devices Semiconductors, The Bipolar Transistor, The Integrated Circuit, Integrated NPN Transistors, The Case of the Lateral PNP Transistor, CMOS Transistors, The Substrate PNP Transistor, Diodes, Zener Diodes, Resistors, Capacitors, CMOS vs. Bipolar; 2. Simulation, DC Analysis, AC Analysis, Transient Analysis, Variations, Models, Diode Model, Bipolar Transistor Model, Model for the Lateral PNP Transistor, MOS Transistor Models, Resistor Models, Models for Capacitors; 3. Current Mirrors; 4. Differential Pairs; 5. Current Sources; 6. Time Out: Analog Measures, dB, RMS, Noise, Fourier Analysis, Distortion, Frequency Compensation; 7. Bandgap References; 8. Op Amps; 9. Comparators; 10. Transimpedance Amplifiers; 11. Timers and Oscillators; 12. Phase-Locked Loops; 13. Filters; 14. Power, Linear Regulators, Low Drop-Out Regulators, Switching Regulators, Linear Power Amplifiers, Switching Power Amplifiers; 15. A to D and D to A, The Delta-Sigma Converter; 16. Odds and Ends, Gilbert Cell, Multipliers, Peak Detectors, Rectifiers and Averaging Circuits, Thermometers, Zero-Crossing Detectors; 17. Layout.

[Cadence OrCAD PCB Designer OrCAD PSpice Version 16.3\(2010\)](#) - 2010-07-20

High Speed PCB Design - Lee W. Ritchey 1996

PSpice for Circuit Theory and Electronic Devices - Paul Tobin 2013-08-01

PSpice for Circuit Theory and Electronic Devices is one of a series of five PSpice books and introduces the latest Cadence Orcad PSpice version 10.5 by simulating a range of DC and AC exercises. It is aimed primarily at those wishing to get up to speed with this version but will be of use to high school students, undergraduate students, and of course, lecturers. Circuit theorems are applied to a range of circuits and the calculations by hand after analysis are then compared to the simulated results. The Laplace transform and the s-plane are used to analyze CR and LR circuits where transient signals are involved. Here, the Probe output graphs demonstrate what a great learning tool PSpice is by providing the reader with a visual verification of any theoretical calculations. Series and parallel-tuned resonant circuits are investigated where the difficult concepts of dynamic impedance and selectivity are best understood by sweeping different circuit parameters through a range of values. Obtaining semiconductor device characteristics as a laboratory exercise has fallen out of favour of late, but nevertheless, is still a useful exercise for understanding or modelling semiconductor devices. Inverting and non-inverting operational amplifiers characteristics such as gain-bandwidth are investigated and we will see the dependency of bandwidth on the gain using the performance analysis facility. Power amplifiers are examined where PSpice/Probe demonstrates very nicely the problems of cross-over distortion and other problems associated with power transistors. We examine power supplies and the problems of regulation, ground bounce, and power factor correction. Lastly, we look at MOSFET device characteristics and show how these devices are used to form basic CMOS logic gates such as NAND and NOR gates.

Printed Circuits Handbook - Clyde F. Coombs 1988

[Make Your Own PCBs with EAGLE: From Schematic Designs to Finished Boards](#) - Simon Monk 2014-08-05

Design custom printed circuit boards with EAGLE Learn how to make double-sided professional-quality PCBs from the ground up using EAGLE--the powerful, flexible design software. In this step-by-step guide, electronics guru Simon Monk leads you through the process of designing a schematic, transforming it into a PCB layout, and submitting standard Gerber files to a manufacturing service to create your finished board. Filled with detailed illustrations, photos, and screenshots, Make Your Own

PCBs with EAGLE features downloadable example projects so you can get started right away. Install EAGLE Light Edition and discover the views and screens that make up an EAGLE project Create the schematic and board files for a simple LED project Find the right components and libraries for your projects Work with the Schematic Editor Lay out PCBs with through-hole components and with surface mount technology Build a sound level meter with a small amplifier and ten LEDs Generate Gerber design files to submit for fabrication Solder through-hole PCBs and SMD boards Design a plug-in Arduino shield Build a Raspberry Pi expansion board Automate repetitive tasks using scripts and User Language Programs Create your own libraries and parts and modify existing components

EDN - 2005

[Complete PCB Design Using OrCAD Capture and PCB Editor](#) - Kraig Mitzner 2019-06-21

Complete PCB Design Using OrCAD Capture and PCB Editor, Second Edition, provides practical instruction on how to use the OrCAD design suite to design and manufacture printed circuit boards. Chapters cover how to Design a PCB using OrCAD Capture and OrCAD PCB Editor, adding PSpice simulation capabilities to a design, how to develop custom schematic parts, how to create footprints and PSpice models, and how to perform documentation, simulation and board fabrication from the same schematic design. This book is suitable for both beginners and experienced designers, providing basic principles and the program's full capabilities for optimizing designs. Companion site <https://www.elsevier.com/books-and-journals/book-companion/9780128176849>

Power Supplies for LED Driving - Steve Winder 2011-04-08

Light-emitting diodes are being widely used due to their efficient use of power. The applications for power LEDs include traffic lights, street lamps, automotive lighting, architectural lights, household light replacements, signage lighting (replacing neon strip lights and fluorescent tubes), and many more. Powering (driving) these LED's is not always simple. Linear driving is inefficient and generates far too much heat. With a switching supply, the main issues are EMI and efficiency, and of course cost. The problem is to get a design that meets legal requirements and is efficient, while costing the least. This book covers the design trade-offs involved in LED driving applications, from low-power to UB-LEDs and beyond. Practical, "hands-on" approach to power supply design for LED drivers Detailed examples of what works and why, throughout the design process Commentary on how the calculated component value compares with the actual value used, including a description of why the choice was made

The Hitchhiker's Guide to PCB Design - Ema Design Automation 2019-02-19

Want to create a solid, manufacturable PCB the first time? Well, you're in luck. Get the only book you will ever need to upgrade your PCB knowledge and launch your career to new heights. Forget the school of hard-knocks and learn all the things industry experts wish they knew when starting out. With over 100 pages of content including checklists, pro-tips, and detailed illustrations, you'll gain decades of wisdom in a fraction of the time. Read the Hitchhikers Guide to PCB Design to be entertained and learn - How to create a robust and manufacturable PCB layout beyond routing the rats - Why it's important to incorporate DFX (Design for Excellence) and the many topics it covers - Who your project stakeholders are and why their involvement is essential for design success - PCB Design best practices you need to know and more BONUS- You can get a FREE digital download of the guide by visiting the EMA Design Automation website.

[SPICE for Power Electronics and Electric Power, Third Edition](#) - Muhammad H. Rashid 2012-05-24

Power electronics can be a difficult course for students to understand and for professors to teach. Simplifying the process for both, SPICE for Power Electronics and Electric Power, Third Edition illustrates methods of integrating industry standard SPICE software for design verification and as a theoretical laboratory bench. Helpful PSpice Software and Program Files Available for Download Based on the author Muhammad H. Rashid's considerable experience merging design content and SPICE into a power electronics course, this vastly improved and updated edition focuses on helping readers integrate the SPICE simulator with a minimum amount of time and effort. Giving users a better understanding of the operation of a power electronics circuit, the author explores the transient behavior of current and voltage waveforms for each and every circuit element at every stage. The book also includes examples of all types of power converters, as well as circuits with linear and nonlinear inductors. New in this edition: Student learning outcomes (SLOs) listed at the start of each

chapter Changes to run on OrCAD version 9.2 Added VPRINT1 and IPRINT1 commands and examples Notes that identify important concepts Examples illustrating EVALUE, GVALUE, ETABLE, GTABLE, ELAPLACE, GLAPLACE, EFREQ, and GFREQ Mathematical relations for expected outcomes, where appropriate The Fourier series of the output voltages for rectifiers and inverters PSpice simulations of DC link inverters and AC voltage controllers with PWM control This book demonstrates techniques of executing power conversions and ensuring the quality of the output waveforms rather than the accurate modeling of power semiconductor devices. This approach benefits students, enabling them to compare classroom results obtained with simple switch models of devices. In addition, a new chapter covers multi-level converters. Assuming no prior knowledge of SPICE or PSpice simulation, the text provides detailed step-by-step instructions on how to draw a schematic of a circuit, execute simulations, and view or plot the output results. It also includes suggestions for laboratory experiments and design problems that can be used for student homework assignments.

Functional Reverse Engineering of Strategic and Non-Strategic Machine Tools - Wasim Ahmed Khan 2021-06-21

This book describes capacity building in strategic and non-strategic machine tool technology. It includes machine building in sectors such as machine tools, automobiles, home appliances, energy, and biomedical engineering, along with case studies. The book offers guidelines for capacity building in academia, covering how to promote enterprises of functional reverse engineering enterprises. It also discusses machine tool development, engineering design, prototyping of strategic, and non-strategies machine tools, as well as presenting communication strategies and IoT, along with case studies. Professionals from the CNC (Computer Numeric Control) machine tools industry, industrial and manufacturing engineers, and students and faculty in engineering disciplines will find interest in this book.

Designing Circuit Boards with EAGLE - Matthew Scarpino 2014-03-27

"Matt Scarpino has provided a great tool for the hobbyist starting out in the circuit board design world, demonstrating all the features you'll need to create your own circuit board projects. However, the experienced engineer will also benefit from the book, as it serves as a complete reference guide to all EAGLE software configuration settings and features. His insightful guidance helps simplify difficult tasks, and his handy tips will help save you hours of trial-and-error experimentation." --Rich Blum, author, Sams Teach Yourself Arduino Programming in 24 Hours and Sams Teach Yourself Python Programming for Raspberry Pi in 24 Hours Powerful, flexible, and inexpensive, EAGLE is the ideal PCB design solution for every Maker/DIYer, startup, hobbyist, or student. Today, all open source Arduino designs are released in EAGLE format: If you want to

design cost-effective new PCBs, this is the tool to learn. Matthew Scarpino helps you take full advantage of EAGLE's remarkable capabilities. You won't find any differential equations here: only basic circuit theory and hands-on techniques for designing effective PCBs and getting innovative new gadgets to market. Scarpino starts with an accessible introduction to the fundamentals of PCB design. Next, he walks through the design of basic, intermediate, and complex circuit boards, starting with a simple inverting amplifier and culminating in a six-layer single-board computer with hundreds of components and thousands of routed connections. As the circuits grow more complex, you'll master advanced EAGLE features and discover how to automate crucial design-related tasks. Whatever your previous experience, Scarpino's start-to-finish examples and practical insight can help you create designs of stunning power and efficiency. Understand single-sided, double-sided, and multilayer boards Design practical circuits with the schematic editor Transform schematics into physical board designs Convert board designs into Gerber output files for fabrication Expand EAGLE's capabilities with new libraries and components Exchange designs with LTspice and simulate their responses to input Automate simple repetitive operations with editor commands Streamline circuit design and library generation with User Language programs (ULPs) Design for the advanced BeagleBone Black, with high-speed BGA devices and a 32-bit system on a chip (SoC) Use buses to draw complex connections between components Configure stackups, create/route BGA components, and route high-speed signals eagle-book.com provides an archive containing the design files for the book's circuits. It also includes EAGLE libraries, scripts, and User Language programs (ULPs).

Analog Design and Simulation Using OrCAD Capture and PSpice - Dennis Fitzpatrick 2011-11-16

Anyone involved in circuit design that needs the practical know-how it takes to design a successful circuit or product, will find this practical guide to using Capture-PSpice (written by a former Cadence PSpice expert for Europe) an essential book. The text delivers step-by-step guidance on using Capture-PSpice to help professionals produce reliable, effective designs. Readers will learn how to get up and running quickly and efficiently with industry standard software and in sufficient detail to enable building upon personal experience to avoid common errors and pit-falls. This book is of great benefit to professional electronics design engineers, advanced amateur electronics designers, electronic engineering students and academic staff looking for a book with a real-world design outlook. Provides both a comprehensive user guide, and a detailed overview of simulation Each chapter has worked and ready to try sample designs and provides a wide range of to-do exercises Core skills are developed using a running case study circuit Covers Capture and PSpice together for the first time.