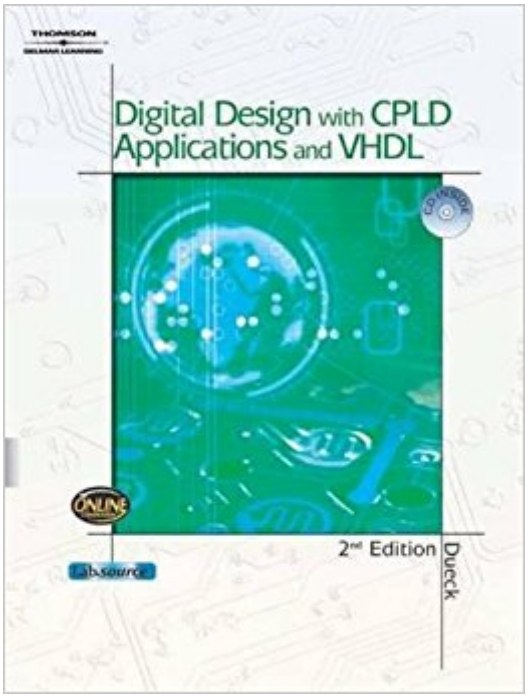
Digital Design With CPLD Applications And VHDL



Synopsis

This Second Edition continues to use programmable logic as the primary vehicle for teaching digital design principles, and maintains its cutting-edge status by updating to Altera's newest Quartus II software, the most current method of digital design implementation. This Windows-based software allows users to design, test, and program CPLD designs in text-based (VHDL) and graphic (schematic entry) formats. The Second Edition introduces CPLDs earlier in the teaching sequence, laying a solid foundation for more advanced principles without neglecting underlying digital fundamentals such as Boolean algebra, logic minimization, and combinational and sequential circuits. VHDL and Quartus II applications are provided throughout.

Book Information

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Customer Reviews

Basic Principles of Digital Systems. Logic Functions and Gates. Boolean Algebra and Combinational Logic. Introduction to PLDs and Quartus II. Introduction to VHDL. Combinational Logic Functions. Digital Arithmetic and Arithmetic Circuits. Introduction to Sequential Logic. Counters and Shift Registers. State Machine Design. Logic Gate Circuitry. Interfacing Analog and Digital Circuits. Memory Devices and Systems. Introduction to Microprocessors.

Robert Dueck received his B.Sc. degree in electrical engineering from the University of Manitoba in Winnipeg, Canada, and worked for several years as a design engineer at Motorola Canada in Toronto. He began teaching in 1986, specializing in digital and microcomputer subjects in the

Electronics and Computer Engineering Technology programs at Seneca College in Toronto. His first book, Fundamentals of Digital Electronics, was published in 1994, and he has written several additional textbooks. He now teaches digital electronics and related courses at Red River College in Winnipeg. Mr. Dueck is a member of the Association of Professional Engineers and Geoscientists of Manitoba (APEGM) and the Institute of Electrical and Electronics Engineers (IEEE). He served as chair of the Winnipeg Section of IEEE in 2002 and was branch counselor of the Red River College Student Branch from 1997-2006.

I used this book for a digital logic design class, but it’s not all that useful if you want to learn circuit design. There are much better hardware and software solution alternatives available that are completely ignored in this textbook. E.g. microprocessors may be a better option than an FPGA but the book insists on using overly complicated example problems just to try and show how something could be done in VHDL.If you are serious about learning about embedded systems, programmable logic, and the like, I suggest you look else where, especially for the price.

great book!

This book was a big help for me when I was in school.

It was great! And they have great prices.

like it

This is a good book for beginners to digital logic and VHDL. It spends a lot of time explaining how different components like encoders, decoders, muxes, state machines, etc work. That’s good for people who haven’t been exposed to the material before. If you want to learn that stuff and apply it in VHDL, it’s a great book. If you’re just trying to learn one or another aspect, there are probably better books out there. If you want to learn VHDL from the book and already know a fair amount about digital logic, it’s tough because you keep on skipping stuff you already know and and then later find out that there was VHDL information buried in that section on seven-segment displays. Similarly, people just trying to learn digital logic who are uninterested in VHDL will probably find that they spend a lot of time skipping past explanation of VHDL. Add in the fact that lots of space is taken up by screenshots of Altera software, and the book ends up containing surprisingly little

information for its size. People who want a thorough discussion of digital logic or VHDL should look elsewhere. Beginners will probably be right at home.

The teaching of digital electronics using CPLD is very useful, the book covers theory, truth table, gate level implementation. The examples show you how to create a module, for instance,a multiplexer.It doesnt only end here, it further demonstrate the application of the multiplexer. From there, you can have better understanding from gate level up to system level. I benefit a lot from this approach. The examples are very useful despite I am not writing in VHDL.The book also explain the internal architecture of CPLD, starting from the history development of programmable logic devices. If you want to learn on CPLD, this is definitely the book for you, even if you are not using VHDL.

This book provides a good review of basic principles of digital design in the context of CPLDs. The designs included on the CD are for Altera's Quartus II, but can be modified for any VHDL based design. The author presents designs in both text (VHDL) and schematic form.Although the bookÂ Digital Design Fourth International EditionÂ by Mano is the standard text in digital design, this book provides some introduction to basic concepts, as well. In addition, the examples allow the reader to quickly jump into VHDL based designs on CPLDs.

photography, portrait ... landscape photography, good pictures) Digital Drawing for Landscape Architecture: Contemporary Techniques and Tools for Digital Representation in Site Design Career Building Through Using Digital Design Tools (Digital Career Building)