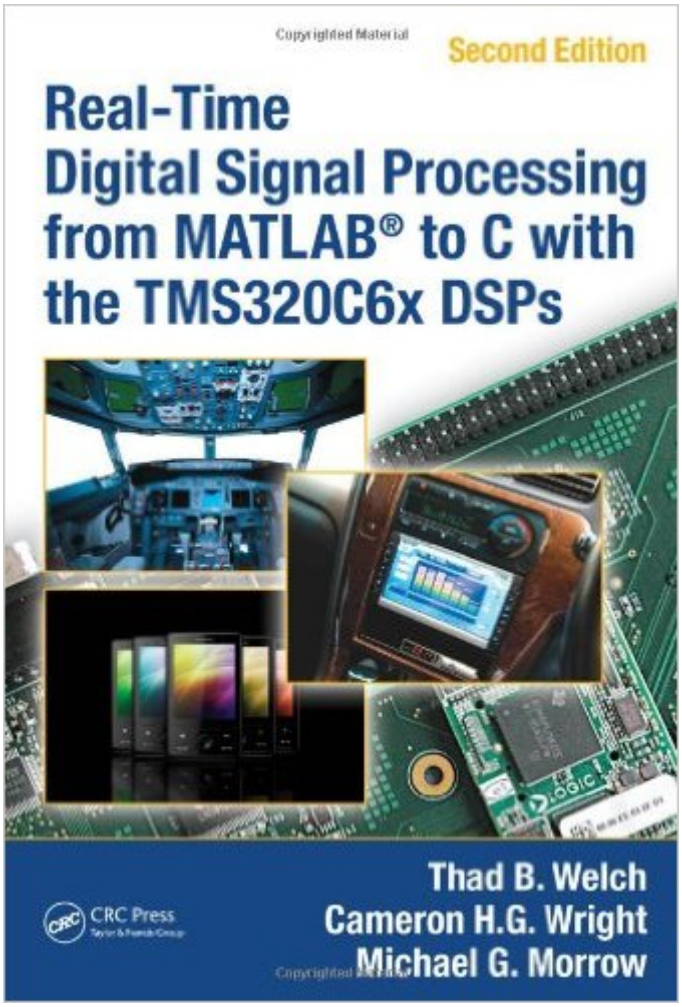
Real-Time Digital Signal Processing From MATLABÂ® To C With The TMS320C6x DSPs, Second Edition



Synopsis

From the Foreword: "â |There are many good textbooks today to teach digital signal processing, but most of them are content to teach the theory, and perhaps some MATLABÂ® simulations. This book has taken a bold step forward. It not only presents the theory, it reinforces it with simulations, and then it shows us how to actually use the results in real-time applications. This last step is not a trivial step, and that is why so many books, and courses, present only theory and simulations. With the combined expertise of the three authors of this textâ |the reader can step into the real-time world of applications with a text that presents an accessible pathâ |" â •Delores M. Etter, Texas Instruments Distinguished Chair in Electrical Engineering and Executive Director, Caruth Institute for Engineering Education, Southern Methodist University, Dallas, Texas, USA Mastering practical application of real-time digital signal processing (DSP) remains one of the most challenging and time-consuming pursuits in the field. It is even more difficult without a resource to bridge the gap between theory and practice. Filling that void, Real-Time Digital Signal Processing from MATLABÂ® to C with the TMS320C6x DSPs, Second Edition is organized in three sections that cover enduring fundamentals and present practical projects and invaluable appendices. This updated edition gives readers hands-on experience in real-time DSP using a practical, step-by-step framework that also incorporates demonstrations, exercises, and problems, coupled with brief overviews of applicable theory and MATLABÂ® application. Engineers, educators, and students rely on this book for precise, simplified instruction on use of real-time DSP applications. The bookâ ™s software supports the latest high-performance hardware, including the powerful, inexpensive, and versatile OMAP-L138 Experimenter Kit and other development boards. Incorporating readersâ ™ valuable feedback and suggestions, this installment covers additional topics (such as PN sequences) and more advanced real-time DSP projects (including higher-order digital communications projects), making it even more valuable as a learning tool.

Book Information

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Customer Reviews

This is a very good book.I own Chassaing's and Donald Reay first edition as well as the updated version of Reay after Chassaing passed.These two books complement each other. This book gets to the main point very quickly in a simple way and covers MATLAB plus C algorithms pretty well. Where it may lack is that it doesn't go deep in assembly but I think that was intended. They cover a lot of important subjects beyond filtering. and they updated their software package files for the updated and cheaper TI entry board over logic's board. if you own either board you are fine.Reay's book complements with additional and very clever algorithms for efficient filtering in real time and he does go into asm examples. But Reay did not go into the many other topics they do here.word of caution. DSP is a complex subject. Final undergrad to first year grad. To understand the main ideas you must have studied some basics already. If you don't know the basic foundations of filtering (transfer functions, z plane) you will be a little lost. I think if you understand a bit on signals and their frequency counterpart and some basic decent first/second undergrad math you should be OK. the book does cover basics but briefly. there are some excellent theory online classes you could pick up at edx and coursers first.I also own kuo/lee's version for the fixed point c5505 and I must say this one is the best.

I've taught with their first book for 4 years now. Great stuff. This book is a perfect blend of theory and a top-down learning method for each of the topics. Gives a great basis for hands-on programming for DSPs and introduces a very nice (free) teaching tool, WinDSK.

If you already have some basic prior knowledge about DSP as well as programming in MATLAB and C, this is a pretty good book. Where it falls short is in explaining theory behind some concepts, but overall it's generally a good book.

Real-Time Digital Signal Processing from MATLABÂ® to C with the TMS320C6x DSPs, Second

Edition Digital Signal Processing with Examples in MATLABÂ®, Second Edition (Electrical Engineering & Applied Signal Processing Series) Digital Signal Processing: with Selected Topics: Adaptive Systems, Time-Frequency Analysis, Sparse Signal Processing Multidimensional Digital Signal Processing (Prentice-Hall Signal Processing Series) Discrete-Time Signal Processing (3rd Edition) (Prentice-Hall Signal Processing Series) uC/OS-III, The Real-Time Kernel, or a High Performance, Scalable, ROMable, Preemptive, Multitasking Kernel for Microprocessors, Microcontrollers & DSPs (Board NOT Included) Bayesian Signal Processing: Classical, Modern and Particle Filtering Methods (Adaptive and Cognitive Dynamic Systems: Signal Processing, Learning, Communications and Control) Signal Processing Algorithms in Fortran and C (Prentice-Hall Signal Processing Series) Real Time Digital Signal Processing Applications With Motorola's Dsp56000 Family Real-Time Digital Signal Processing: Implementations and Applications Real Time Systems and Programming Languages: Ada 95, Real-Time Java and Real-Time C/POSIX (3rd Edition) Real Estate: Learn to Succeed the First Time: Real Estate Basics, Home Buying, Real Estate Investment & House Flipping (Real Estate income, investing, Rental Property) LabVIEW Digital Signal Processing: and Digital Communications Analog and Digital Signal Processing:2nd (Second) edition Discrete Systems and Digital Signal Processing with MATLAB, Second Edition Digital Signal Processing Laboratory, Second Edition Digital Signal Processing, Second Edition: Fundamentals and Applications DSP Applications Using C and the TMS320C6x DSK Biosignal and Medical Image Processing (Signal Processing and Communications) Speech and Audio Signal Processing: Processing and Perception of Speech and Music