

## Digital Signal Processing Applications With Motorolas Dsp56002 Processor

With the advent of "multimedia", digital signal processing (DSP) of sound has emerged from the shadow of bandwidth limited speech processing to become a research field of its own. To date, most research in DSP applied to sound has been concentrated on speech, which is bandwidth limited to about 4 kilohertz. Speech processing is also limited by the low fidelity typically expected in the telephone network. Today, the main applications of audio DSP are high quality audio codng and the digital generation and manipu- measurement techniques and analysis/synthesis methods. Additional important topics are hearing aids using signal processing technology and hardware architectures for digital signal processing of audio. In all these areas the last decade has seen a significant amount of application-oriented research. The frequency range of wideband audio has an upper limit of 20 kilohertz and the resulting difference in frequency range and Signal to Noise Ratio (SNR) due to sample size must be taken into account when designing DSP systems. Interest in pursuing or using. These algorithms and techniques are revealed in this book. This book is suitable for advanced level courses and serves as a valuable reference for researchers in the field. Interested and informed engineers will also find the book useful in their work.

Informal, easy-to-understand introduction covers phasors and tuning forks, wave equation, sampling and quantizing, feedforward and feedback filters, comb and string filters, periodic sounds, transform methods, and filter design. 1996 edition. Some applications of digital signal processing in telecommunications. Digital processing in audio signals. Digital processing of speech. Digital image processing. Applications of digital signal processing to radar. Sonar signal processing. Digital signal processing in geophysics.

Principles and Applications

With Applications to Digital Audio and Computer Music

Theory and Application of Digital Signal Processing

Applications of Digital Signal Processing to Audio and Acoustics

Advanced Digital Signal Processing

A uniquely practical DSP text, this book gives a thorough understanding of the principles and applications of DSP with a minimum of mathematics, and provides the reader with an introduction to DSP applications in telecoms, control engineering and measurement and data analysis systems. The new edition contains: • Expanded coverage of the basic concepts to aid understanding • New sections on filter synthesis, control theory and contemporary topics of speech and image recognition • Full solutions to all questions and exercises in the book Assuming the reader already has some prior knowledge of signal theory, this textbook will be highly suitable for undergraduate and postgraduate students in electrical and electronic engineering taking introductory and advanced courses in DSP, as well as courses in communications and control systems engineering. It will also prove an invaluable introduction to DSP and its applications for the professional engineer. Expanded coverage of the basic concepts to aid understanding, along with a wide range of DSP applications New textbook features included throughout, including learning objectives, summary sections, exercises and worked examples to increase accessibility of the text Full solutions to all questions and exercises included in the book This excellent Senior undergraduate/graduate textbook offers an unprecedented measurement of science perspective on DSP theory and applications, a wealth of definitions and real-life examples making it invaluable for students, while practical.

Devices overview. Discrete signal and systems. Z transforms. The discrete Fourier transform. FIR and IIR filter design methods. Kalman filters. Implementation of digital control algorithms. Review of architectures. Microcontrollers. Systolic arrays. Case studies.

Digital Signal Processing Applications with the 320 Family

A DSP Primer

An Introduction with MATLAB and Applications

Principles, Algorithms and System Design

Digital Signal Processing Techniques and Applications in Radar Image Processing

This textbook provides engineering students with instruction on processing signals encountered in speech, music, and wireless communications using software or hardware by employing basic mathematical methods. The book starts with an overview of signal processing, introducing readers to the field. It goes on to give instruction in converting continuous time signals into digital signals and discusses various methods to process the digital signals, such as filtering. The author uses MATLAB throughout as a user-friendly software tool to perform various digital signal processing algorithms and to simulate real-time systems. Readers learn how to convert analog signals into digital signals; how to process these signals using software or hardware; and how to write algorithms to perform useful operations on the acquired signals such as filtering, detecting digitally modulated signals, correcting channel distortions, etc. Students are also shown how to convert MATLAB codes into firmware codes. Further, students will be able to apply the basic digital signal processing techniques in their workplace. The book is based on the author's popular online course at the University of California, San Diego.

This new book by Ken Steigitz offers an informal and easy-to-understand introduction to digital signal processing, emphasizing digital audio and applications to computer music. A DSP Primer covers important topics such as phasors and tuning forks; the wave equation; sampling and quantizing; feedforward and feedback filters; comb and string filters; periodic sounds; transform methods; and filter design. Steigitz uses an intuitive and qualitative approach to develop the mathematics critical to understanding DSP. A DSP Primer is written for a broad audience including: Students of DSP in Engineering and Computer Science courses. Composers of computer music and those who work with digital sound. WWW and Internet developers who work with multimedia. General readers interested in science that want an introduction to DSP. Features: Offers a simple and uncluttered step-by-step approach to DSP for first-time users, especially beginners in computer music. Designed to provide a working knowledge and understanding of frequency domain methods, including FFT and digital filtering. Contains thought-provoking questions and suggested experiments that help the reader to understand and apply DSP theory and techniques.

In three parts, this book contributes to the advancement of engineering education and that serves as a general reference on digital signal processing. Part I presents the basics of analog and digital signals and systems in the time and frequency domain. It covers the core topics: convolution, transforms, filters, and random signal analysis. It also treats important applications including signal detection in noise, radar range estimation for airborne targets, binary communication systems, channel estimation, banking and financial applications, and audio effects production. Part II considers selected signal processing systems and techniques. Core topics covered are the Hilbert transform, binary signal transmission, phase-locked loops, sigma-delta modulation, noise shaping, quantization, adaptive filters, and non-stationary signal analysis. Part III presents some selected advanced DSP topics.

Advanced Digital Signal Processing and Noise Reduction

Theory and Applications

Fundamentals and Applications

Practical Applications in Digital Signal Processing

Concepts and Applications

*The Only DSP Book 100% Focused on Step-by-Step Design and Implementation of Real Devices and Systems in Hardware and Software Practical Applications in Digital Signal Processing is the first DSP title to address the area that even the excellent engineering textbooks of today tend to omit. This book fills a large portion of that omission by addressing circuits and system applications that most design engineers encounter in the modern signal processing industry. This book includes original work in the areas of Digital Data Locked Loops (DLLs), Digital Automatic Gain Control (dAGC), and the design of fast elastic store memory used for synchronizing independently clocked asynchronous data bit streams. It also contains detailed design discussions on Cascaded Integrator Comb (CIC) filters, including the seldom-covered topic of bit pruning. Other topics not extensively covered in other modern textbooks, but detailed here, include analog and digital signal tuning, complex-to-real conversion, the design of digital channelizers, and the techniques of digital frequency synthesis. This book also contains an appendix devoted to the techniques of writing mixed-language C/C++ Fortran programs. Finally, this book contains very extensive review material covering important engineering mathematical tools such as the Fourier series, the Fourier transform, the z transform, and complex variables. Features of this book include • Thorough coverage of the complex-to-real conversion of digital signals • A complete tutorial on digital frequency synthesis • Lengthy discussion of analog and digital tuning and signal translation • Detailed coverage of the design of elastic store memory • A comprehensive study of the design of digital data locked loops • Complete coverage of the design of digital channelizers • A detailed treatment on the design of digital automatic gain control • Detailed techniques for the design of digital and multirate filters • Extensive coverage of the CIC filter, including the topic of bit pruning • An extensive review of complex variables • An extensive review of the Fourier series, and continuous and discrete Fourier transforms • An extensive review of the z transform*

*A self-contained approach to DSP techniques and applications in radar imaging The processing of radar images, in general, consists of three major fields: Digital Signal Processing (DSP); antenna and radar operation; and algorithms used to process the radar images. This book brings together material from these different areas to allow readers to gain a thorough understanding of how radar images are processed. The book is divided into three main parts and covers: • DSP principles and signal characteristics in both analog and digital domains, advanced signal sampling, and interpolation techniques • Antenna theory (Maxwell equation, radiation field from dipole, and linear phased arrays), radar fundamentals, radar modulation, and target-detection techniques (continuous wave, pulsed Linear Frequency Modulation, and stepped Frequency Modulation) • Properties of radar images, algorithms used for radar image processing, simulation examples, and results of satellite image files processed by Range-Doppler and Stolt interpolation algorithms The book fully utilizes the computing and graphical capability of MATLAB® to display the signals at various processing stages in 3D and/or cross-sectional views. Additionally, the text is complemented with flowcharts and system block diagrams to aid in readers' comprehension. Digital Signal Processing Techniques and Applications in Radar Image Processing serves as an ideal textbook for graduate students and practicing engineers who wish to gain firsthand experience in applying DSP principles and technologies to radar imaging.*

*Digital Signal Processing, Second Edition enables electrical engineers and technicians in the fields of biomedical, computer, and electronics engineering to master the essential fundamentals of DSP principles and practice. Many instructive worked examples are used to illustrate the material, and the use of mathematics is minimized for easier grasp of concepts. As such, this title is also useful to undergraduates in electrical engineering, and as a reference for science students and practicing engineers. The book goes beyond DSP theory, to show implementation of algorithms in hardware and software.*

*Additional topics covered include adaptive filtering with noise reduction and echo cancellations, speech compression, signal sampling, digital filter realizations, filter design, multimedia applications, over-sampling, etc. More advanced topics are also covered, such as adaptive filters, speech compression such as PCM, u-law, ADPCM, and multi-rate DSP and over-sampling ADC. New to this edition: MATLAB projects dealing with practical applications added throughout the book New chapter (chapter 13) covering sub-band coding and wavelet transforms, methods that have become popular in the DSP field New applications included in many chapters, including applications of DFT to seismic signals, electrocardiography data, and vibration signals All real-time C programs revised for the TMS320C6713 DSK Covers DSP principles with emphasis on communications and control applications Chapter objectives, worked examples, and end-of-chapter exercises aid the reader in grasping key concepts and solving related problems Website with MATLAB programs for simulation and C programs for real-time DSP*

*Proceedings: The University of Western Australia, Perth, Western Australia, 26 - 29 November, 1996*

*Mathematical Summary for Digital Signal Processing Applications with Matlab*

*Digital Signal Processors*

*Real-time Digital Signal Processing*

*Digital Signal Processing and Spectral Analysis for Scientists*

Combining clear explanations of elementary principles, advanced topics and applications with step-by-step mathematical derivations, this textbook provides a comprehensive yet accessible introduction to digital signal processing. All the key topics are covered, including discrete-time Fourier transform, z-transform, discrete Fourier transform and FFT, A/D conversion, and FIR and IIR filtering algorithms, as well as more advanced topics such as multirate systems, the discrete cosine transform and spectral signal processing. Over 600 full-color illustrations, 200 fully worked examples, hundreds of end-of-chapter homework problems and detailed computational examples of DSP algorithms implemented in MATLAB® and C aid understanding, and help put knowledge into practice. A wealth of supplementary material accompanies the book online, including interactive programs for instructors, a full set of solutions and MATLAB® laboratory exercises, making this the ideal text for senior undergraduate and graduate courses on digital signal processing.

Mathematical summary for Digital Signal Processing Applications with Matlab consists of Mathematics which is not usually dealt in the DSP core subject, but used in DSP applications. Matlab programs with illustrations are given for the selective topics such as generation of Multivariate Gaussian distributed sample outcomes, Bacterial foraging algorithm, Newton 's iteration, Steepest descent algorithm, etc. are given exclusively in the separate chapter. Also Mathematical summary for Digital Signal Processing Applications with Matlab is written in such a way that it is suitable for Non-Mathematical readers and is very much suitable for the beginners who are doing research in Digital Signal Processing.

Applications of Digital Signal ProcessingPrentice Hall

Digital Signal Processing: DSP and Applications

Digital Signal Processing Applications Using the ADSP-2100 Family

Digital Signal Processing Applications

Real-Time Digital Signal Processing

Digital Signal Processing for Measurement Systems

*Digital Signal Processing: Fundamentals and Applications, Third Edition, not only introduces students to the fundamental principles of DSP, it also provides a working knowledge that they take with them into their engineering careers. Many instructive, worked examples are used to illustrate the material, and the use of mathematics is minimized for an easier grasp of concepts. As such, this title is also useful as a reference for non-engineering students and practicing engineers. The book goes beyond DSP theory, showing the implementation of algorithms in hardware and software. Additional topics covered include adaptive filtering with noise reduction and echo cancellations, speech compression, signal sampling, digital filter realizations, filter design, multimedia applications, over-sampling, etc. More advanced topics are also covered, such as adaptive filters, speech compression such as PCM, u-law, ADPCM, and multi-rate DSP, over-sampling ADC subband coding, and wavelet transform. Covers DSP principles with an emphasis on communications and control applications Includes chapter objectives, worked examples, and end-of-chapter exercises that aid the reader in grasping key concepts and solving related problems Provides an accompanying website with MATLAB programs for simulation and C programs for real-time DSP Presents new problems of varying types and difficulties*

*Digital signal processing (DSP) has been applied to a very wide range of applications. This includes voice processing, image processing, digital communications, the transfer of data over the internet, image and data compression, etc. Engineers who develop DSP applications today, and in the future, will need to address many implementation issues including mapping algorithms to computational structures, computational efficiency, power dissipation, the effects of finite precision arithmetic, throughput and hardware implementation. It is not practical to cover all of these in a single text. However, this text emphasizes the practical implementation of DSP algorithms as well as the fundamental theories and analytical procedures that form the basis for modern DSP applications. Digital Signal Processing: Principles, Algorithms and System Design provides an introduction to the principals of digital signal processing along with a balanced analytical and practical treatment of algorithms and applications for digital signal processing. It is intended to serve as a suitable text for a one semester junior or senior level undergraduate course. It is also intended for use in a following one semester first-year graduate level course in digital signal processing. It may also be used as a reference by professionals involved in the design of embedded computer systems, application specific integrated circuits or special purpose computer systems for digital signal processing, multimedia, communications, or image processing. Covers fundamental theories and analytical procedures that form the basis of modern DSP Shows practical implementation of DSP in software and hardware Includes Matlab for design and implementation of signal processing algorithms and related discrete time systems Bridges the gap between reference texts and the knowledge needed to implement DSP applications in software or hardware*

*Combines both the DSP principles and real-timeimplementations and applications, and now updated with the neweZdsp USB Stick, which is very low cost, portable and widelyemployed at many DSP labs. Real-Time Digital Signal Processing introducesfundamental digital signal processing (DSP) principles and will beupdated to include the latest DSP applications, introduce newsoftware development tools and adjust the software design processsto reflect the latest advances in the field. In the 3rdedition of the book, the key aspect of hands-on experiments will beenhanced to make the DSP principles more interesting and directlyinteract with the real-world applications. All of the programs willbe carefully updated using the most recent version of softwaredevelopment tools and the new TMS320VC5505 ezdsp USB Stick forreal-time experiments. Due to its lower cost and portability, thenew software and hardware tools are now widely used in universitylabs and in commercial industrial companies to replace the olderand more expensive generation. The new edition will have a renewedfocus on real-time applications and will offer step-by-stepshans on experiments for a complete design cycle starting fromfloating-point C language program to fixed-point C implementation,code optimization using INTRINSICS, and mixed C-and-assemblyprogramming on fixed-point DSP processors. This new methodologyenables readers to concentrate on learning DSP fundamentals andinnovative applications by relaxing the intensive programmingefforts, namely, the traditional DSP assembly coding efforts. The book is organized into two parts; Part One introduces thedigital signal processing principles and theories, and PartTwo focuses on practical applications. The topics for theapplications are the extensions of the theories in Part One with anemphasis placed on the hands-on experiments, systematic design andimplementation approaches. The applications provided in the bookare carefully chosen to reflect current advances of DSP that are ofmost relevance for the intended readership. Combines both the DSP principles and real-time implementationsand applications using the new ezdsp USB Stick, which is very lowcost, portable and widely employed at many DSP labs is now used inthe new edition Places renewed emphasis on C-code experiments and reduces theexercises using assembly coding; effective use of C programming,fixed-point C code and INTRINSICS will become the main focus of thenew edition. Updates to application areas to reflect latest advances such aspeech coding techniques used for next generation networks (NGN),audio coding with surrounding sound, wideband speech codec (ITUG.722.2 Standard), fingerprint for image processing, and biomedicalsignal processing examples. Contains new addition of several projects that can be used assemester projects; as well as new many new real-time experimentsusing TI's binary libraries – the experiments areprepared with flexible interface and modular for readers to adaptand modify to create other useful applications from the providedbasic programs. Consists of more MATLAB experiments, such as filter design,algorithm evaluation, proto-typing for C-code architecture, andsimulations to aid readers to learn DSP fundamentals. Includes supplementary material of program and data files forexamples, applications, and experiments hosted on a companionwebsite. A valuable resource for Postgraduate students enrolled on DSPcourses focused on DSP implementation & applications as well asSenior undergraduates studying DSP; engineers and programmers whoeened to learn and use DSP principles and development tools forththeir projects.*

*Principles, Devices and Applications*

*Krishna's Digital Signal Processing: (Principles and Applications)*

*Architectures, Implementations, and Applications*

*Introductory Digital Signal Processing with Computer Applications*

*Fundamentals, Implementations and Applications*

*Signal processing plays an increasingly central role in the development of modern telecommunication and information processing systems, with a wide range of applications in areas such as multimedia technology, audio-visual signal processing, cellular mobile communication, radar systems and financial data forecasting. The theory and application of signal processing deals with the identification, modelling and utilisation of patterns and structures in a signal process. The observation signals are often distorted, incomplete and noisy and hence, noise reduction and the removal of channel distortion is an important part of a signal processing system. Advanced Digital Signal Processing and Noise Reduction, Third Edition, provides a fully updated and structured presentation of the theory and applications of statistical signal processing and noise reduction methods. Noise is the eternal bane of communications engineers, who are always striving to find new ways to improve the signal-to-noise ratio in communications systems and this resource will help them with this task. " Features two new chapters on Noise, Distortion and Diversity in Mobile Environments and Noise Reduction Methods for Speech Enhancement over Noisy Mobile Devices. " Topics discussed include: probability theory, Bayesian estimation and classification, hidden Markov models, adaptive filters, multi-band linear prediction, spectral estimation, and impulsive and transient noise removal. " Explores practical solutions to interpolation of missing signals, echo cancellation, impulsive and transient noise removal, channel equalisation, HMM-based signal and noise decomposition. This is an invaluable text for senior undergraduates, postgraduates and researchers in the fields of digital signal processing, telecommunications and statistical data analysis. It will also appeal to engineers in telecommunications and audio and signal processing industries. This book is a uniquely practical DSP text which places the emphasis on understanding the principles and applications of DSP with a minimum of mathematics. In one volume, it covers a broad area of digital signal processing systems such as A/D and D/A converters, adaptive filters, spectral estimation, neural networks, Kalman filters, fuzzy logic, data compression, error correction and DSP programming. Many courses will find that this book will replace several texts currently in use. The level is ideal for introductory university modules, and similar courses such as HNC/D. As DSP has come to be studied at a lower academic level over recent years this text meets a genuine need. It is also suitable for use on industrial training courses and ideal as a reference text for professionals. A readable introduction to the practical application of DSP Broad coverage of the subject means this will cover a typical undergraduate module in just one book Practical focus with maths treated as a practical tool - not an advanced maths text*

*"An excellent introductory book" (Review of the First Edition in the International Journal of Electrical Engineering Education) "It will serve as a reference book in this area for a long time" (Review of Revised Edition in Zentralblatt für Mathematik (Germany)) Firmly established as the essential introductory Digital Signal Processing (DSP) text, this second edition reflects the growing importance of random digital signals and random DSP in the undergraduate syllabus by including two new chapters. The authors' practical, problem-solving approach to DSP continues in this new material, which is backed up by additional worked examples and computer programs. The book now features: • fundamentals of digital signals and systems ' time and frequency domain analysis and processing, including digital convolution and the Discrete and Fast Fourier Transforms ' design and practical application of digital filters ' description and processing of random signals, including correlation, filtering, and the detection of signals in noise Programs in C and equivalent PASCAL are listed in an Appendix. Typical results and graphic plots from all the programs are illustrated and discussed in the main text. The overall approach assumes no prior knowledge of electronics, computing, or DSP. An ideal text for undergraduate students in electrical, electronic and other branches of engineering, computer science, applied mathematics and physics. Practising engineers and scientists will also find this a highly accessible introduction to an increasingly important field.*

*Engineering Applications*

*Introduction to Digital Signal Processing Using MATLAB with Application to Digital Communications*

*Mathematical and Computational Methods, Software Development and Applications*

*Handbook of Digital Signal Processing*

*Digital Signal Processing and Applications with the TMS320C6713 and TMS320C6416 DSK*

This book forms the first part of a complete MSc course in an area that is fundamental to the continuing revolution in information technology and communication systems. Massively exhaustive, authoritative, comprehensive and reinforced with software, this is an introduction to modern methods in the developing field of Digital Signal Processing (DSP). The focus is on the design of algorithms and the processing of digital signals in areas of communications and control, providing the reader with a comprehensive introduction to the underlying principles and mathematical models. Provides an introduction to modern methods in the developing field of Digital Signal Processing (DSP) Focuses on the design of algorithms and the processing of digital signals in areas of communications and control Provides a comprehensive introduction to the underlying principles and mathematical models of Digital Signal Processing

Provides a detailed treatment of the concepts and applications of advanced digital signal processing.

Digital Signal Processing and Applications with the TMS320C6713 and TMS320C6416 DSK Now in a new edition—the most comprehensive, hands-on introduction to digital signal processing The first edition of Digital Signal Processing and Applications with the TMS320C6713 and TMS320C6416 DSK is widely accepted as the most extensive text available on the hands-on teaching of Digital Signal Processing (DSP). Now, it has been fully updated in this valuable Second Edition to be compatible with the latest version (3.1) of Texas Instruments Code Composer Studio (CCS) development environment. Maintaining the original's comprehensive, hands-on approach that has made it an instructor's favorite, this new edition also features: Added program examples that illustrate DSP concepts in real-time and in the laboratory Expanded coverage of analog input and output New material on frame-based processing A revised chapter on IIR, which includes a number of floating-point example programs that explore IIR filters more comprehensively More extensive coverage of DSP/BIOS All programs listed in the text—plus additional applications—which are available on a companion website No other book provides such an extensive or comprehensive set of program examples to aid instructors in teaching DSP in a laboratory using audio frequency signals—making this an ideal text for DSP courses at the senior undergraduate and postgraduate levels. It also serves as a valuable resource for researchers, DSP developers, business managers, and technology solution providers who are looking for an overview and examples of DSP algorithms implemented using the TMS320C6713 and TMS320C6416 DSK

1996 IEEE TENCON - Digital Signal Processing Applications

Digital Signal Processing Applications with the TMS320 Family

Applications of Digital Signal Processing

Digital Signal Processing Primer

This book covers the basics of processing and spectral analysis of monovariate discrete-time signals. The approach is practical, the aim being to acquaint the reader with the indications for and drawbacks of the various methods and to highlight possible misuses. The book is rich in original ideas, visualized in new and illuminating ways, and is structured so that parts can be skipped without loss of continuity. Many examples are included, based on synthetic data and real measurements from the fields of physics, biology, medicine, macroeconomics etc., and a complete set of MATLAB exercises requiring no previous experience of programming is provided. Prior advanced mathematical skills are not needed in order to understand the contents: a good command of basic mathematical analysis is sufficient. Where more advanced mathematical tools are necessary, they are included in an Appendix and presented in an easy-to-follow way. With this book, digital signal processing leaves the domain of engineering to address the needs of scientists and scholars in traditionally less quantitative disciplines, now facing increasing amounts of data.

Digital Signal Processing: Concepts and Applications, second edition covers the basic principles and operation of DSP devices. Its aim is to give the student the essentials of this mathematical subject in a form that can be easily understood and assimilated. The text concentrates on discrete systems, starting from digital filters and discrete Fourier transforms. These are then extended into adaptive filters and spectrum analysers with the minimum of mathematical derivation, concentrating on demonstrating the performance which is achievable from these processors in communications and radar system applications. This new edition has been updated to include learning outcomes and summaries and provide more examples. The text has been completely redesigned and is presented in a clear and easy-to-read style. Key features: - Self assessment questions within the text, with answers provided - Numerous practical worked examples on processor design and performance simulation - MATLAB® code for animated simulations available to students via World Wide Web access This textbook is appropriate for undergraduate and MSc courses in signals and systems and signal processing, and for professional engineers who wish to have a simple, easy-to-read reference book on DSP techniques.

This CD contains five appendices from the book and programs (MATLAB, Simulink, C, and TMS320C5000 assembly) with their associated data files.

Digital Signal Processing and Applications

Implementations, Applications, and Experiments with the TMS320C5X

Proceedings

Digital Signal Processing

Digital Signal Processing: Principles, Algorithms, And Applications, 4/E

*A comprehensive and mathematically accessible introduction to digital signal processing, covering theory, advanced topics, and applications.*

*FROM THE PREFACE: Many new useful ideas are presented in this handbook, including new finite impulse response (FIR) filter design techniques, half-band and multiplierless FIR filters, interpolated FIR (IFIR) structures, and error spectrum shaping.*

*The second in a two-volume set, this book shows how the ADSP-2100 family of digital signal processors are used to solve particular problems in telecommunications, hardware interfaces, and data encoding, decoding and transmission. Each chapter covers a single application topic.*