Digital Signal Processing Using the ARM Cortex M4

Donald S. Reay

Digital Signal Processing Using the ARM Cortex M4

Donald S. Reay

Digital Signal Processing Using the ARM Cortex M4 Donald S. Reay

Features inexpensive ARM® Cortex®-M4 microcontroller development systems available from Texas Instruments and STMicroelectronics.

This book presents a hands-on approach to teaching Digital Signal Processing (DSP) with real-time examples using the ARM® Cortex®-M4 32-bit microprocessor. Real-time examples using analog input and output signals are provided, giving visible (using an oscilloscope) and audible (using a speaker or headphones) results. Signal generators and/or audio sources, e.g. iPods, can be used to provide experimental input signals. The text also covers the fundamental concepts of digital signal processing such as analog-to-digital and digital-to-analog conversion, FIR and IIR filtering, Fourier transforms, and adaptive filtering.

Digital Signal Processing Using the ARM® Cortex®-M4:

- Uses a large number of simple example programs illustrating DSP concepts in real-time, in an electrical engineering laboratory setting
- Includes examples for both STM32F407 Discovery and the TM4C123 Launchpad, using *Keil MDK-ARM*, on a companion website
- Example programs for the TM4C123 Launchpad using *Code Composer Studio version 6* available on companion website

Digital Signal Processing Using the ARM® Cortex®-M4 serves as a teaching aid for university professors wishing to teach DSP using laboratory experiments, and for students or engineers wishing to study DSP using the inexpensive ARM® Cortex®-M4.

Donald Reay is a lecturer in electrical engineering at Heriot-Watt University in Edinburgh, Scotland. He has also taught hands-on DSP, on a number of occasions, as a visiting lecturer at Zhejiang University in Hangzhou, China. He co-authored *Digital Signal Processing and Applications with the TMS320C6713 and TMS320C6416 DSK, Second Edition* (Wiley 2008) with Rulph Chassaing, and is the author of *Digital Signal Processing and Applications with the OMAP-L138 eXperimenter* (Wiley 2012).

From reader reviews:

Kristen Hamilton:

Do you one among people who can't read pleasant if the sentence chained inside straightway, hold on guys this particular aren't like that. This Digital Signal Processing Using the ARM Cortex M4 book is readable by simply you who hate those straight word style. You will find the data here are arrange for enjoyable reading experience without leaving even decrease the knowledge that want to give to you. The writer associated with Digital Signal Processing Using the ARM Cortex M4 content conveys thinking easily to understand by a lot of people. The printed and e-book are not different in the content material but it just different as it. So , do you nonetheless thinking Digital Signal Processing Using the ARM Cortex M4 is not loveable to be your top list reading book?

Robert Bell:

Reading can called brain hangout, why? Because when you are reading a book specially book entitled Digital Signal Processing Using the ARM Cortex M4 your mind will drift away trough every dimension, wandering in each and every aspect that maybe unfamiliar for but surely can become your mind friends. Imaging each word written in a book then become one type conclusion and explanation in which maybe you never get prior to. The Digital Signal Processing Using the ARM Cortex M4 giving you another experience more than blown away the mind but also giving you useful information for your better life in this era. So now let us demonstrate the relaxing pattern the following is your body and mind will be pleased when you are finished looking at it, like winning an activity. Do you want to try this extraordinary investing spare time activity?

Shane Hern:

Do you have something that you like such as book? The e-book lovers usually prefer to opt for book like comic, brief story and the biggest you are novel. Now, why not trying Digital Signal Processing Using the ARM Cortex M4 that give your satisfaction preference will be satisfied by means of reading this book. Reading behavior all over the world can be said as the means for people to know world far better then how they react in the direction of the world. It can't be mentioned constantly that reading routine only for the geeky man but for all of you who wants to be success person. So , for every you who want to start reading as your good habit, you may pick Digital Signal Processing Using the ARM Cortex M4 become your personal starter.

Jillian Harrington:

Is it a person who having spare time in that case spend it whole day by watching television programs or just lying on the bed? Do you need something totally new? This Digital Signal Processing Using the ARM Cortex M4 can be the response, oh how comes? A book you know. You are therefore out of date, spending your time by reading in this fresh era is common not a geek activity. So what these publications have than the others?

Read Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay for online ebook

Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay books to read online.

Online Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay ebook PDF download

Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay Doc

Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay Mobipocket

Digital Signal Processing Using the ARM Cortex M4 by Donald S. Reay EPub