
Atmel Arm Programming For Embedded Systems

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 Building real-time embedded systems using FreeRTOS, STM32 MCUs, and SEGGER debug tools
 The STM32F103 Arm Microcontroller and Embedded Systems: Using Assembly and C
 The Definitive Guide to ARM® Cortex®-M3 and Cortex®-M4 Processors
 Atmel Arm Programming for Embedded Systems
 Atmel AVR Microcontroller Primer
 Professional Embedded ARM Development
 Introduction to Embedded Systems
 Create versatile and robust embedded solutions for MCUs and RTOSes with modern C++
 Fundamentals and Techniques, Second Edition
 Stm32 Arm Programming for Embedded Systems
 A Fundamental Technology for Makers
 The Definitive Guide to the ARM Cortex-M3
 A Cyber-Physical Systems Approach
 Intro To Embedded Systems 1E
 Embedded Software Development with C
 High-Performance and Time-Predictable Embedded Computing
 Arm Cortex-M Assembly Programming for Embedded Programmers: Using Keil

Atmel Arm Programming For Embedded Systems

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MARQUEZ BEST

AVR Programming Apress

This book covers the peripheral programming of the STM32 Arm chip. Throughout this book, we use C language to program the STM32F4xx chip peripherals such as I/O ports, ADCs, Timers, DACs, SPIs, I2Cs and UARTs. We use STM32F446RE NUCLEO Development Board which is based on ARM(R) Cortex(R)-M4 MCU. Volume 1 of this series is dedicated to Arm Assembly Language Programming and Architecture. See our website for other titles in this series: www.MicroDigitalEd.com You can also find the tutorials, source codes, PowerPoints and other support materials for this book on our website.

Making Embedded Systems Microdigitaled

A practical Wrox guide to ARM programming for mobile devices. With more than 90 percent of mobile phones sold in recent years using ARM-based processors, developers are eager to master this embedded technology. If you know the basics of C programming, this guide will ease you into the world of embedded

ARM technology. With clear explanations of the systems common to all ARM processors and step-by-step instructions for creating an embedded application, it prepares you for this popular specialty. While ARM technology is not new, existing books on the topic predate the current explosive growth of mobile devices using ARM and don't cover these all-important aspects. Newcomers to embedded technology will find this guide approachable and easy to understand. Covers the tools required, assembly and debugging techniques, Optimizations, and more. Lists the tools needed for various types of projects and explores the details of the assembly language. Examines the optimizations that can be made to ensure fast code. Provides step-by-step instructions for a basic application and shows how to build upon it. Professional Embedded ARM Development prepares you to enter this exciting and in-demand programming field.

Hands-On Embedded Programming with C++17 Make Books

The STM32F103 microcontroller from ST is one of the widely used ARM microcontrollers. The blue pill board is based on STM32F103 microcontroller. It has a low price and it is widely available around the world. This book uses the blue pill board to discuss designing embedded systems using STM32F103. In this book, the

authors use a step-by-step and systematic approach to show the programming of the STM32 chip. Examples show how to program many of the STM32F10x features, such as timers, serial communication, ADC, SPI, I2C, and PWM. To write programs for Arm microcontrollers you need to know both Assembly and C languages. So, the text is organized into two parts: 1) The first 6 chapters cover the Arm Assembly language programming. 2) Chapters 7-19 use C to show the STM32F10x peripherals and I/O interfacing to real-world devices such as keypad, 7-segment, character and graphic LCDs, motor, and sensor. The source codes, power points, tutorials, and support materials for the book is available on the following website: <http://www.NicerLand.co>
ARM-based Microcontroller Projects Using mbed Pragmatic Bookshelf

Authored by two of the leading authorities in the field, this guide offers readers the knowledge and skills needed to achieve proficiency with embedded software.

Programming Embedded Systems Maker Media, Inc.

Who uses ARM? Currently ARM CPU is licensed and produced by more than 200 companies and is the dominant CPU chip in both cell phones and tablets. Given its RISC architecture and powerful 32-bit instructions set, it can be used for both 8-bit and 32-bit embedded products. The ARM corp. has already defined the 64-bit instruction extension and for that reason many Laptop and Server manufacturers are introducing ARM-based Laptop and Servers. Who will use our textbook? This book is intended for both academic and industry readers. If you are using this book for a university course, the support materials and tutorials can be found on www.MicroDigitalEd.com. This book covers the Assembly language programming of the ARM chip. The ARM Assembly language is standard regardless of who makes the chip. The ARM licensees are free to implement the on-chip peripheral (ADC, Timers, I/O, etc.) as they choose. Since the ARM peripherals are not standard among the various vendors, we have dedicated a separate book to each vendor.

Designing Embedded Systems with Arduino Tata McGraw-Hill Education

Over 50 hands-on recipes that will help you develop amazing real-time applications using GPIO, RS232, ADC, DAC, timers, audio codecs, graphics LCD, and a touch screen About This Book This book focuses on programming embedded systems using a practical approach Examples show how to use bitmapped graphics and manipulate digital audio to produce amazing games and other multimedia applications The recipes in this book are written using ARM's MDK Microcontroller Development Kit which is the most comprehensive and accessible development solution Who This Book Is For This book is aimed at those with an interest in designing and programming embedded systems. These could include electrical engineers or computer programmers who want to get started with microcontroller applications using the ARM Cortex-M4 architecture in a short time frame. The book's recipes can also be used to support students learning embedded programming for the first time. Basic knowledge of programming using a high level language is essential but those familiar with other high level languages such as Python or Java should not have too much difficulty picking up the basics of embedded C programming. What You Will Learn Use ARM's uVision MDK to configure the microcontroller run time environment (RTE), create projects and compile download and run simple programs on an evaluation board. Use and extend device family packs to configure I/O peripherals. Develop multimedia applications using the touchscreen and audio codec beep generator. Configure the codec to stream digital audio and design digital filters to create amazing audio effects. Write multi-threaded programs using ARM's real time operating system (RTOS). Write critical sections

of code in assembly language and integrate these with functions written in C. Fix problems using ARM's debugging tool to set breakpoints and examine variables. Port uVision projects to other open source development environments. In Detail Embedded microcontrollers are at the core of many everyday electronic devices. Electronic automotive systems rely on these devices for engine management, anti-lock brakes, in car entertainment, automatic transmission, active suspension, satellite navigation, etc. The so-called internet of things drives the market for such technology, so much so that embedded cores now represent 90% of all processor's sold. The ARM Cortex-M4 is one of the most powerful microcontrollers on the market and includes a floating point unit (FPU) which enables it to address applications. The ARM Cortex-M4 Microcontroller Cookbook provides a practical introduction to programming an embedded microcontroller architecture. This book attempts to address this through a series of recipes that develop embedded applications targeting the ARM-Cortex M4 device family. The recipes in this book have all been tested using the Keil MCBSTM32F400 board. This board includes a small graphic LCD touchscreen (320x240 pixels) that can be used to create a variety of 2D gaming applications. These motivate a younger audience and are used throughout the book to illustrate particular hardware peripherals and software concepts. C language is used predominantly throughout but one chapter is devoted to recipes involving assembly language. Programs are mostly written using ARM's free microcontroller development kit (MDK) but for those looking for open source development environments the book also shows how to configure the ARM-GNU toolchain. Some of the recipes described in the book are the basis for laboratories and assignments undertaken by undergraduates. Style and approach The ARM Cortex-M4 Cookbook is a practical guide full of hands-on recipes. It follows a step-by-step approach that allows you to find, utilize and learn ARM concepts quickly.

Embedded C Programming and the Atmel Avr (Book Only) Newnes

Using FreeRTOS and libopencm3 instead of the Arduino software environment, this book will help you develop multi-tasking applications that go beyond Arduino norms. In addition to the usual peripherals found in the typical Arduino device, the STM32 device includes a USB controller, RTC (Real Time Clock), DMA (Direct Memory Access controller), CAN bus and more. Each chapter contains clear explanations of the STM32 hardware capabilities to help get you started with the device, including GPIO and several other ST Microelectronics peripherals like USB and CAN bus controller. You'll learn how to download and set up the libopencm3 + FreeRTOS development environment, using GCC. With everything set up, you'll leverage FreeRTOS to create tasks, queues, and mutexes. You'll also learn to work with the I2C bus to add GPIO using the PCF8574 chip. And how to create PWM output for RC control using hardware timers. You'll be introduced to new concepts that are necessary to master the STM32, such as how to extend code with GCC overlays using an external Winbond W25Q32 flash chip. Your knowledge is tested at the end of each chapter with exercises. Upon completing this book, you'll be ready to work with any of the devices in the STM32 family. Beginning STM32 provides the professional, student, or hobbyist a way to learn about ARM without costing an arm! What You'll Learn Initialize and use the libopencm3 drivers and handle interrupts Use DMA to drive a SPI based OLED displaying an analog meter Read PWM from an RC control using hardware timers Who This Book Is For Experienced embedded engineers, students, hobbyists and makers wishing to explore the ARM architecture, going beyond Arduino limits.

The Avr Microcontroller and Embedded Systems Using

Assembly and C River Publishers

ARM-based Microcontroller Projects Using mbed gives readers a good understanding of the basic architecture and programming of ARM-based microcontrollers using ARM's mbed software. The book presents the technology through a project-based approach with clearly structured sections that enable readers to use or modify them for their application. Sections include: Project title, Description of the project, Aim of the project, Block diagram of the project, Circuit diagram of the project, Construction of the project, Program listing, and a Suggestions for expansion. This book will be a valuable resource for professional engineers, students and researchers in computer engineering, computer science, automatic control engineering and mechatronics. Includes a wide variety of projects, such as digital/analog inputs and outputs (GPIO, ADC, DAC), serial communications (UART, I2C, SPI), WIFI, Bluetooth, DC and servo motors Based on the popular Nucleo-L476RG development board, but can be easily modified to any ARM compatible processor Shows how to develop robotic applications for a mobile robot Contains complete mbed program listings for all the projects in the book

Make: AVR Programming Packt Publishing Ltd

Create the perfectly customized system by unleashing the power of Android OS on your embedded device About This Book Understand the system architecture and how the source code is organized Explore the power of Android and customize the build system Build a fully customized Android version as per your requirements Who This Book Is For If you are a Java programmer who wants to customize, build, and deploy your own Android version using embedded programming, then this book is for you. What You Will Learn Master Android architecture and system design Obtain source code and understand the modular organization Customize and build your first system image for the Android emulator Level up and build your own Android system for a real-world device Use Android as a home automation and entertainment system Tailor your system with optimizations and add-ons Reach for the stars: look at the Internet of Things, entertainment, and domotics In Detail Take a deep dive into the Android build system and its customization with Learning Embedded Android Programming, written to help you master the steep learning curve of working with embedded Android. Start by exploring the basics of Android OS, discover Google's "repo" system, and discover how to retrieve AOSP source code. You'll then find out to set up the build environment and the first AOSP system. Next, learn how to customize the boot sequence with a new animation, and use an Android "kitchen" to "cook" your custom ROM. By the end of the book, you'll be able to build customized Android open source projects by developing your own set of features. Style and approach This step-by-step guide is packed with various real-world examples to help you create a fully customized Android system with the most useful features available.

ARM Assembly Language Atmel Arm Programming for Embedded Systems Why Atmel ARM? The AVR is the most popular 8-bit microcontroller designed and marketed by the Atmel (now part of Microchip). Due to the popularity of ARM architecture, many semiconductor design companies are adopting the ARM as the CPU of choice in all their designs. This is the case with Atmel ARM. The Atmel SAM D is a Cortex M0+ chip. A major feature of the Atmel SAM D is its lower power consumption which makes it an ideal microcontroller for use in designing low power devices with IoT. It is an attempt to "bring Atmel AVR Ease-of-Use to ARM Cortex M0+ Based Microcontrollers." Why this book? We have a very popular AVR book widely used by many universities. This book attempts to help students and practicing engineers to move from AVR to ARM programming. It shows programming for

interfacing of Atmel ARM SAM D to LCD, Serial COM port, DC motor, stepper motor, sensors, and graphics LCD. It also covers the detailed programming of Interrupts, ADC, DAC, and Timer features of Atmel ARM SAM D21 chip. All the programs in this book are tested using the SAM D21 trainer board with Keil and Atmel Studio IDE compiler. It must be noted that while Arduino Uno uses the Atmel 8-bit AVR microcontroller, the Arduino Zero uses the Atmel ARM SAMD21 chip. See our website: www.MicroDigitalEd.com Arm Cortex-M Assembly Programming for Embedded Programmers: Using Keil To write programs for Arm microcontrollers, you need to know both Assembly and C languages. The book covers Assembly language programming for Cortex-M series using Thumb-2. Now, most of the Arm Microcontrollers use the Thumb-2 instruction set. The ARM Thumb-2 Assembly language is standard regardless of who makes the chip. However, the ARM licensees are free to implement the on-chip peripheral (ADC, Timers, I/O, etc.) as they choose. Since the ARM peripherals are not standard among the various vendors, we have dedicated a separate book to each vendor. Some of them are: TI Tiva ARM Programming For Embedded Systems: Programming ARM Cortex-M4 TM4C123G with C (Mazidi & Naimi Arm Series) TI MSP432 ARM Programming for Embedded Systems (Mazidi & Naimi Arm Series) The STM32F103 Arm Microcontroller and Embedded Systems: Using Assembly and C (Mazidi & Naimi Arm Series) STM32 Arm Programming for Embedded Systems Atmel ARM Programming for Embedded Systems For more information see the following websites: www.NicerLand.com www.MicroDigitalEd.com The Avr Microcontroller and Embedded Systems Using Assembly and C Using Arduino Uno and Atmel Studio The AVR microcontroller from Atmel (now Microchip) is one of the most widely used 8-bit microcontrollers. Arduino Uno is based on AVR microcontroller. It is inexpensive and widely available around the world. This book combines the two. In this book, the authors use a step-by-step and systematic approach to show the programming of the AVR chip. Examples in both Assembly language and C show how to program many of the AVR features, such as timers, serial communication, ADC, SPI, I2C, and PWM. The text is organized into two parts: 1) The first 6 chapters use Assembly language programming to examine the internal architecture of the AVR. 2) Chapters 7-18 uses both Assembly and C to show the AVR peripherals and I/O interfacing to real-world devices such as LCD, motor, and sensor. The first edition of this book published by Pearson used ATmega32. It is still available for purchase from Amazon. This new edition is based on ATmega328 and the Arduino Uno board. The appendices, source codes, tutorials and support materials for both books are available on the following websites: <http://www.NicerLand.com/> and http://www.MicroDigitalEd.com/AVR/AVR_books.htm Stm32 Arm Programming for Embedded Systems In this DIY guide, you will learn how to use Arduino - the open-source hardware board for makers, hobbyists, and inventors. You will learn how to develop your own projects, create prototypes, and produce professional-quality embedded systems. A simple step-by-step demonstration system accompanies you from vision to reality - and just like riding a bike, you'll get better at it, the more you do it. Featuring a wealth of detailed diagrams and more than 50 fully functional examples, this book will help you get the most out of this versatile tool and bring your electronic inventions to life.

Embedded Controllers Using C and Arduino Springer

This new edition has been fully revised and updated to include extensive information on the ARM Cortex-M4 processor, providing a complete up-to-date guide to both Cortex-M3 and Cortex-M4 processors, and which enables migration from various processor

architectures to the exciting world of the Cortex-M3 and M4. This book presents the background of the ARM architecture and outlines the features of the processors such as the instruction set, interrupt-handling and also demonstrates how to program and utilize the advanced features available such as the Memory Protection Unit (MPU). Chapters on getting started with IAR, Keil, gcc and CoCoX ColIDE tools help beginners develop program codes. Coverage also includes the important areas of software development such as using the low power features, handling information input/output, mixed language projects with assembly and C, and other advanced topics. Two new chapters on DSP features and CMSIS-DSP software libraries, covering DSP fundamentals and how to write DSP software for the Cortex-M4 processor, including examples of using the CMSIS-DSP library, as well as useful information about the DSP capability of the Cortex-M4 processor. A new chapter on the Cortex-M4 floating point unit and how to use it. A new chapter on using embedded OS (based on CMSIS-RTOS), as well as details of processor features to support OS operations. Various debugging techniques as well as a troubleshooting guide in the appendix topics on software porting from other architectures. A full range of easy-to-understand examples, diagrams and quick reference appendices.

The Definitive Guide to the ARM Cortex-M0 Arm Education Media

Nowadays, the prevalence of computing systems in our lives is so ubiquitous that we live in a cyber-physical world dominated by computer systems, from pacemakers to cars and airplanes. These systems demand for more computational performance to process large amounts of data from multiple data sources with guaranteed processing times. Actuating outside of the required timing bounds may cause the failure of the system, being vital for systems like planes, cars, business monitoring, e-trading, etc. High-Performance and Time-Predictable Embedded Computing presents recent advances in software architecture and tools to support such complex systems, enabling the design of embedded computing devices which are able to deliver high-performance whilst guaranteeing the application required timing bounds. Technical topics discussed in the book include: Parallel embedded platforms, Programming models, Mapping and scheduling of parallel computations, Timing and schedulability analysis, Runtimes and operating systems. The work reflected in this book was done in the scope of the European project P-SOCRATES, funded under the FP7 framework program of the European Commission. High-performance and time-predictable embedded computing is ideal for personnel in computer/communication/embedded industries as well as academic staff and master/research students in computer science, embedded systems, cyber-physical systems and internet-of-things.

Arm Assembly Language Programming & Architecture John Wiley & Sons

Why Atmel ARM? The AVR is the most popular 8-bit microcontroller designed and marketed by the Atmel (now part of Microchip). Due to the popularity of ARM architecture, many semiconductor design companies are adopting the ARM as the CPU of choice in all their designs. This is the case with Atmel ARM. The Atmel SAM D is a Cortex M0+ chip. A major feature of the Atmel SAM D is its lower power consumption which makes it an ideal microcontroller for use in designing low power devices with IoT. It is an attempt to "bring Atmel AVR Ease-of-Use to ARM Cortex M0+ Based Microcontrollers." Why this book? We have a very popular AVR book widely used by many universities. This book attempts to help students and practicing engineers to move from AVR to ARM programming. It shows programming for interfacing of Atmel ARM SAM D to LCD, Serial COM port, DC motor, stepper motor, sensors, and graphics LCD. It also covers

the detailed programming of Interrupts, ADC, DAC, and Timer features of Atmel ARM SAM D21 chip. All the programs in this book are tested using the SAM D21 trainer board with Keil and Atmel Studio IDE compiler. It must be noted that while Arduino Uno uses the Atmel 8-bit AVR microcontroller, the Arduino Zero uses the Atmel ARM SAMD21 chip. See our website:

www.MicroDigitalEd.com

Learning Embedded Android N Programming CRC Press

This text focuses on software development for embedded controllers using the C language. This book is built on Atmel® AVR architecture and implementation, and features the CodeVisionAVR compiler, as well as other powerful, yet inexpensive, development tools. This book is suitable as a handbook for those desiring to learn the AVR processors or as a text for college-level microcontroller courses. Included with the book is a CDROM containing samples all of the example programs from the book as well as an evaluation version of the CodeVisionAVR C Compiler and IDE.

With C and GNU Development Tools Packt Publishing Ltd

The first microcontroller textbook to provide complete and systemic introductions to all components and materials related to the ARM® Cortex®-M4 microcontroller system, including hardware and software as well as practical applications with real examples. This book covers both the fundamentals, as well as practical techniques in designing and building microcontrollers in industrial and commercial applications. Examples included in this book have been compiled, built, and tested. Includes Both ARM® assembly and C codes. Direct Register Access (DRA) model and the Software Driver (SD) model programming techniques and discussed. If you are an instructor and adopted this book for your course, please email ieeeproposals@wiley.com to get access to the instructor files for this book.

Hands-On RTOS with Microcontrollers McGraw Hill Professional

This textbook provides practicing scientists and engineers a primer on the Atmel AVR microcontroller. In this second edition we highlight the popular ATmega164 microcontroller and other pin-for-pin controllers in the family with a complement of flash memory up to 128 kbytes. The second edition also adds a chapter on embedded system design fundamentals and provides extended examples on two different autonomous robots. Our approach is to provide the fundamental skills to quickly get up and operating with this internationally popular microcontroller. We cover the main subsystems aboard the ATmega164, providing a short theory section followed by a description of the related microcontroller subsystem with accompanying hardware and software to exercise the subsystem. In all examples, we use the C programming language. We include a detailed chapter describing how to interface the microcontroller to a wide variety of input and output devices and conclude with several system level examples. Table of Contents: Atmel AVR Architecture Overview / Serial Communication Subsystem / Analog-to-Digital Conversion / Interrupt Subsystem / Timing Subsystem / Atmel AVR Operating Parameters and Interfacing / Embedded Systems Design

Beginning STM32 Springer Science & Business Media

To write programs for Arm microcontrollers, you need to know both Assembly and C languages. The book covers Assembly language programming for Cortex-M series using Thumb-2. Now, most of the Arm Microcontrollers use the Thumb-2 instruction set. The ARM Thumb-2 Assembly language is standard regardless of who makes the chip. However, the ARM licensees are free to implement the on-chip peripheral (ADC, Timers, I/O, etc.) as they choose. Since the ARM peripherals are not standard among the various vendors, we have dedicated a separate book to each vendor. Some of them are: TI Tiva ARM Programming For Embedded Systems: Programming ARM Cortex-M4 TM4C123G

with C (Mazidi & Naimi Arm Series) TI MSP432 ARM Programming for Embedded Systems (Mazidi & Naimi Arm Series) The STM32F103 Arm Microcontroller and Embedded Systems: Using Assembly and C (Mazidi & Naimi Arm Series) STM32 Arm Programming for Embedded Systems Atmel ARM Programming for Embedded Systems For more information see the following websites: www.NicerLand.com www.MicroDigitalEd.com

The X86 PC Newnes

About the Raspberry Pi: Raspberry Pi boards are low cost yet powerful boards using Arm processors. They can be used for both educational and industrial purposes. About this book: This book covers Arm Assembly programming for Raspberry Pi boards. Although the Arm instructions are standard, the assembler directives vary in GCC and non-GCC assemblers. In this book, you learn how to write Arm assembly programs in Linux and the GCC based compilers. This book also gives you a general view of the Arm and Raspberry Pi architecture. If you are using this book for a university course, the source code, tutorials, Power Points and other support materials are available on our website:

www.NicerLand.com Here is the table of contents: Chapter 1: The History of ARM, Raspberry Pi, and Microprocessors Chapter 2: ARM Architecture and Assembly Language Programming Chapter 3: Arithmetic and Logic Instructions and Programs Chapter 4: Branch, Call, and Looping in ARM Chapter 5: Signed Integer Numbers Arithmetic Chapter 6: ARM Memory Map, Memory Access, and Stack Chapter 7: ARM Pipeline and CPU Evolution Chapter 8: ARM and Thumb Instructions Chapter 9: ARM Floating-point Arithmetic Chapter 10: Interrupts and Exceptions Chapter 11: Cache in ARM Appendix A: ARM Cortex-A Instruction Description Appendix B: ARM Assembler Directives Appendix C: Macros Appendix D: Flowcharts and Pseudocode Appendix E: Passing Arguments into Functions We also have a book on writing Arm Assembly Programs for non-GCC compilers entitled "ARM Assembly Language Programming & Architecture" which covers Arm assembly language programming for Keil and other non-GNU IDEs.

Programming with STM32: Getting Started with the Nucleo Board and C/C++ Morgan & Claypool Publishers

Delivering a solid introduction to assembly language and embedded systems, ARM Assembly Language: Fundamentals and Techniques, Second Edition continues to support the popular

ARM7TDMI, but also addresses the latest architectures from ARM, including Cortex™-A, Cortex-R, and Cortex-M processors—all of which have slightly different instruction sets, programmer's models, and exception handling. Featuring three brand-new chapters, a new appendix, and expanded coverage of the ARM7™, this edition: Discusses IEEE 754 floating-point arithmetic and explains how to program with the IEEE standard notation Contains step-by-step directions for the use of Keil™ MDK-ARM and Texas Instruments (TI) Code Composer Studio™ Provides a resource to be used alongside a variety of hardware evaluation modules, such as TI's Tiva Launchpad, STMicroelectronics' iNemo and Discovery, and NXP Semiconductors' Xplorer boards Written by experienced ARM processor designers, ARM Assembly Language: Fundamentals and Techniques, Second Edition covers the topics essential to writing meaningful assembly programs, making it an ideal textbook and professional reference.

Programming Embedded Systems in C and C++ Apress

Technology is constantly changing. New microcontrollers become available every year and old ones become redundant. The one thing that has stayed the same is the C programming language used to program these microcontrollers. If you would like to learn this standard language to program microcontrollers, then this book is for you! ARM microcontrollers are available from a large number of manufacturers. They are 32-bit microcontrollers and usually contain a decent amount of memory and a large number of on-chip peripherals. Although this book concentrates on ARM microcontrollers from Atmel, the C programming language applies equally to other manufacturers' ARMs as well as other microcontrollers. The book features: Use only free or open source software; Learn how to download, set up and use free C programming tools; Start learning the C language to write simple PC programs before tackling embedded programming -- no need to buy an embedded system right away!; Start learning to program from the very first chapter with simple programs and slowly build from there; No programming experience is necessary!; Learn by doing -- type and run the example programs and exercises; Sample programs and exercises can be downloaded from the Internet; A fun way to learn the C programming language; Ideal for electronic hobbyists, students and engineers wanting to learn the C programming language in an embedded environment on ARM microcontrollers.

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