



Intelligent sensor design using the microchip dsPIC /

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Monografía

Intelligent sensors are revolutionizing the world of system design in everything from sports cars to assembly lines. These new sensors have abilities that leave their predecessors in the dust! They not only measure parameters efficiently and precisely, but they also have the ability to enhance and interrupt those measurements, thereby transforming raw data into truly useful information. Unlike many embedded systems books that confine themselves strictly to firmware and software, this book also delves into the supporting electronic hardware, providing the reader with a complete understanding of the issues involved when interfacing to specific types of sensor and offering insight into the real-world problems designers will face. Meaningful software examples are implemented in both C and assembly language, and the source code is included on the accompanying CD. The examples provide a complete, easily extensible code framework for sensor-based applications as well as basic support routines that are often ignored or treated superficially. The goal throughout is to make readers truly productive as quickly as possible while providing the thorough understanding necessary to design robust systems. Readers will gain in-depth, real-world design information that will help them be more productive and get up to speed on sensor design skills more quickly. The book provides designers and students a leg up in a relatively new design area, imparting knowledge about a new microcontroller that offers some of the functionality of a DSP chip. Quickly teaches the reader to design the new wave in sensor technology, "intelligent" sensors In-depth design techniques, real-world examples, detailed figures and usable code Application chapters thoroughly exploring temperature, pressure and load, and flow sensors A FREE CD that provides a toolkit of software models in both C and assembly language

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Contenido: Chapter 1. What Are Intelligent Sensors, and Why Should I Care about Them? -- 1.1 Conventional Sensors Aren't Perfect -- 1.2 First Things First-Digitizing the Sensor Signal -- 1.3 Next Step-Add Some Intelligence

-- 1.4 Finish Up with Quick and Reliable Communications -- 1.5 Put It All Together, and You've Got an Intelligent Sensor -- 1.6 Why Don't We Make Everything Intelligent? -- 1.7 Real-world Examples of Intelligent Sensors -- 1.8 Outline of the Remainder of the Book -- Chapter 2. Intuitive Digital Signal Processing -- 2.1 Foundational Concepts for Signal Processing -- 2.2 Issues Related to Signal Sampling -- 2.3 How to Analyze a Sensor Signal Application -- 2.4 A General Sensor Signal-processing Framework -- 2.5 Summary -- Chapter 3. Underneath the Hood of the dsPIC DSC -- 3.1 The dsPIC DSC's Data Processing Architecture -- 3.2 Interrupt Structure -- 3.3 The On-chip Peripherals -- 3.4 Summary -- Chapter 4: Learning to be a Good Communicator -- 4.1 Types of Communications -- 4.2 Communication Options Available on the dsPIC30F -- 4.3 High-level Protocols -- 4.4 Summary -- Chapter 5. A Basic Toolkit for the dsPIC DSC -- 5.1 The Application Test Bed -- 5.2 Overview of the Firmware Framework -- 5.3 Implementation of the Framework Modules -- 5.4 Summary -- Chapter 6. Sensor Application-Temperature Sensor -- 6.1 Types of Temperature Sensors -- 6.2 Key Aspects of Temperature Measurement -- 6.3 Application Design -- 6.4 Hardware Implementation -- 6.5 Firmware Implementation -- 6.6 Summary -- Chapter 7. Sensor Application-Pressure and Load Sensors -- 7.1 Types of Load and Pressure Sensors -- 7.2 Key Aspects of Load Measurement -- 7.3 Application Design -- 7.4 Firmware Implementation -- 7.5 Summary -- Chapter 8. Sensor Application-Flow Sensors -- 8.1 Types of Flow Sensors -- 8.2 Key Aspects of Flow Measurement -- 8.3 Application Design -- 8.4 Hardware Implementation -- 8.5 Firmware Implementation -- 8.6 Summary -- Chapter 9. Where Are We Headed? -- 9.1 Technology Trends -- 9.2 Economic Trends -- 9.3 Summary -- Appendix A. Software on the Included CD-ROM -- A.1 On-disk Website of Resources -- A.2 Source Code for the Three Applications -- Appendix B. Initialization of the dsPIC DSC and the System Start-up Code -- Appendix C. Buffered, Interrupt-driven Serial I/O -- C.1 Pseudo-code for the Framework -- C.2 System Initialization -- C.3 Reading Data From the Interface -- C.4 Writing Data to the Interface

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