

1. Record Nr.	UNINA9910784358303321
Autore	Nagy Chris
Titolo	Embedded systems design using the TI MSP430 series [[electronic resource] /] / by Chris Nagy
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Newnes, c2003
ISBN	1-280-96454-5 9786610964543 0-08-046988-4
Descrizione fisica	1 online resource (295 p.)
Collana	Embedded technology series
Disciplina	004.2/56
Soggetti	Embedded computer systems - Design and construction - Data processing Texas Instruments MSP430 series microprocessors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover; TOCContents; About the Author; CH1. Introduction; About this book; The MSP430 Family; Part Numbering Convention; Writing Code; CH2. Architecture: CPU and Memory; CPU Features; Memory Structure; CH3. Reset and Interrupts; Reset Sources; Reset Condition; Interrupts; Use of Interrupts; Guidelines for Interrupt Service Routines; Common Sources of Error; Interrupts vs. Polling; CH4. Clocks and Timers; Clock Sources; Clock Controls; Clock Uses; Debugging Clock Difficulties; CH5. Input and Output; CH6. On-Chip Peripherals; Hardware Multiplier; Analog-to-Digital Converters An ADC ExampleLCD Driver; CH7. Hardware Considerations; The Datasheet; Configuration; Performance Issues; Debugging Tools; CH8. Addressing Modes; Register Mode; Immediate Mode; Symbolic Mode/Absolute Mode; Indirect Mode/Indirect Autoincrement Mode; CH9. Instruction Set; Core Instructions; Emulated Instructions; CH10. Flash Memory; Flash Memory Structure; Flash Memory Control Registers; Using Flash Memory; Security Fuse; Information Memory; Flash Memory Code Examples; Bootstrap Loader; CH11. Developer's Toolbox; Real-Time Clocks; D/A Conversion: Pulse Width Modulation; Sliding Correlators CH12. Low-power DesignMSP430 Power Consumption Characteristics;

MSP430 Low-power Modes; Periodic Interrupts and Low-Power Design; Low-power Design; CH13. A Sample Application; Main Loop; Interrupt Service Routines; Putting It All Together; Appendix A. Other Sources; Texas Instruments; Other Embedded Resources; Appendix B. TI FET Tool; Kit Contents; Setting Up; Using Kickstart and the FET; Appendix C. Useful Acronyms; Appendix D. A Sample Datasheet; IDXIndex

Sommario/riassunto

Learn about designing, programming, and developing with the popular new Texas Instruments family of microcontrollers, the MSP430 series with this new book from Chris Nagy. This product line is experiencing explosive growth due to its low-power consumption and powerful features, but very little design and application information is available other than what is offered by the manufacturer. The book fills a gap in the technical literature for embedded systems engineers by offering a more complete combination of technical data, example code, and descriptive prose than is available from the manufa
