1. Record Nr. UNINA9910463137403321

Autore	Nussey John
Titolo	Arduino for dummies [[electronic resource] /] / by John Nussey
Pubbl/distr/stampa	West Sussex, England, : Wiley, c2013
ISBN	1-118-44642-9
Descrizione fisica	1 online resource (459 p.)
Collana	--For Dummies
Disciplina	621.381
Soggetti	Microprocessors Electronics - Data processing Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	About the Author; Contents at a Glance; Table of Contents; Foreword; Introduction; About This Book; Foolish Assumptions; How This Book Is Organized; Icons Used in This Book; Where to Go from Here; Part I: Getting to Know Arduino; Chapter 1: What Is Arduino and Where Did It Come From?; Where Did Arduino Come From?; Learning by Doing; Electronics; Inputs; Outputs; Open Source; Chapter 2: Finding Your Board and Your Way Around It; Getting to Know the Arduino Uno R3; Discovering Other Arduino Boards; Shopping for Arduino; Kitted Out: Starting with a Beginner's Kit; Preparing a Workspace Chapter 3: Downloading and Installing Arduino Installing Arduino; Surveying the Arduino Environment; Chapter 4: Blinking an LED; Working with Your First Arduino Sketch; Looking Closer at the Sketch; Blinking Brighter; Tweaking the Sketch; Part II: Getting Physical with Arduino; Chapter 5: Tools of the Trade; Finding the Right Tools for the Job; Using the Multimeter to Measure Voltage, Current, and Resistance; Chapter 6: A Primer on Electricity and Circuitry; Understanding Electricity; Using Equations to Build Your Circuits; Working with Circuit Diagrams; Color Coding; Datasheets Resistor Color Charts Chapter 7: Basic Sketches: Inputs, Outputs, and Communication; Uploading a Sketch; Using Pulse Width Modulation (PWM); The LED Fade Sketch; The Button Sketch; The AnalogInput Sketch; Talking Serial; Chapter 8: More Basic Sketches: Motion and Sound; Working with Electric Motors; Discovering Diodes; Spinning a

DC Motor; Changing the Speed of Your Motor; Controlling the Speed of Your Motor; Getting to Know Servo Motors; Creating Sweeping Movements; Controlling Your Servo; Making Noises; Making an Instrument; Part III: Building on the Basics; Chapter 9: Learning by Example
Skube Chorus; Push Snowboarding; Baker Tweet; The National Maritime Museum's Compass Lounge and Compass Card; The Good Night Lamp; Little Printer; Flap to Freedom; Chapter 10: Soldering On; Understanding Soldering; Gathering What You Need for Soldering; Staying Safe while Soldering; Assembling a Shield; Acquiring Your Soldering Technique; Building Your Circuit; Packaging Your Project; Chapter 11: Getting Clever with Code; Blinking Better; Taking the Bounce Out of Your Button; Making a Better Button; Smoothing Your Sensors; Calibrating Your Inputs; Chapter 12: Common Sense with Common Sensors
Making Buttons Easier Exploring Piezo Sensors; Utilizing Pressure, Force, and Load Sensors; Sensing with Style; Tripping Along with Lasers; Detecting Movement; Measuring Distance; Testing, Testing . . . Can Anybody Hear This?; Part IV: Unlocking Your Arduino's Potential; Chapter 13: Becoming a Specialist with Shields and Libraries; Looking at Shields; Browsing the Libraries; Chapter 14: Sensing More Inputs and Controlling More Outputs; Controlling Multiple LEDs; Controlling Lots of LEDs by Shifting Out; Chapter 15: Multiplying Your Outputs with I2C; What Is I2C?
Assembling the I2C PWM/Servo Driver

Sommario/riassunto

The quick, easy way to leap into the fascinating world of physical computing This is no ordinary circuit board. Arduino allows anyone, whether you're an artist, designer, programmer or hobbyist, to learn about and play with electronics. Through this book you learn how to build a variety of circuits that can sense or control things in the real world. Maybe you'll prototype your own product or create a piece of interactive artwork? This book equips you with everything you'll need to build your own Arduino project, but what you make is up to you! If you're ready to bring your idea