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Lingua di pubblicazione	Inglese
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Note generali	Includes index
Nota di contenuto	Part I Arduino Engineering Basics -- 1. Getting Started and Understanding the Arduino Landscape -- 2. Digital Inputs, Outputs, and Pulse-Width Modulation -- 3. Interfacing with Analog Sensors -- Part II Interfacing with Your Environment -- 4. Using Transistors and Driving DC Motors -- 5. Driving Stepper and Servo Motors -- 6. Making Sounds and Music -- 7. USB Serial Communication -- 8. Emulating USB Devices -- 9. Shift Registers -- Part III Communication Interfaces -- 10. The I2C Bus -- 11. The SPI Bus and Third-Party Libraries -- 12. Interfacing with Liquid Crystal Displays -- Part IV Digging Deeper and Combining Functions -- 13. Interrupts and Other Special Functions -- 14. Data Logging with SD Cards -- Part V Going Wireless -- 15. Wireless RF Communications -- 16. Bluetooth Connectivity -- 17. Wi-Fi and the Cloud -- Appendix A: Deciphering Datasheets and Schematics -- Index.
Sommario/riassunto	The bestselling beginner Arduino guide, updated with new projects! Exploring Arduino makes electrical engineering and embedded software accessible. Learn step by step everything you need to know about electrical engineering, programming, and human-computer interaction through a series of increasingly complex projects. Arduino

guru Jeremy Blum walks you through each build, providing code snippets and schematics that will remain useful for future projects. Projects are accompanied by downloadable source code, tips and tricks, and video tutorials to help you master Arduino. You'll gain the skills you need to develop your own microcontroller projects! This new 2nd edition has been updated to cover the rapidly-expanding Arduino ecosystem, and includes new full-color graphics for easier reference. Servo motors and stepper motors are covered in richer detail, and you'll find more excerpts about technical details behind the topics covered in the book. Wireless connectivity and the Internet-of-Things are now more prominently featured in the advanced projects to reflect Arduino's growing capabilities. You'll learn how Arduino compares to its competition, and how to determine which board is right for your project. If you're ready to start creating, this book is your ultimate guide! Get up to date on the evolving Arduino hardware, software, and capabilities; Build projects that interface with other devices - wirelessly! Learn the basics of electrical engineering and programming; Access downloadable materials and source code for every project. Whether you're a first-timer just starting out in electronics, or a pro looking to mock-up more complex builds, Arduino is a fantastic tool for building a variety of devices. This book offers a comprehensive tour of the hardware itself, plus in-depth introduction to the various peripherals, tools, and techniques used to turn your little Arduino device into something useful, artistic, and educational. Exploring Arduino is your roadmap to adventure - start your journey today!
