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Nota di contenuto	Exploring BeagleBone; About the Author; About the Technical Editors; Credits; Acknowledgments; Contents; Introduction; Part I BeagleBone Basics; JavaScript and Node.js on the BBB 1; Chapter 1 The BeagleBone Hardware; Introduction to the Platform; Who Should Use the BeagleBone; When to Use the BeagleBone; When You Should Not Use the BeagleBone; echo and cat ; BeagleBone Documentation; The BeagleBone Hardware; BeagleBone Versions; The BeagleBone Black Hardware; BeagleBone Accessories; Highly Recommended Accessories; Micro-SD Card (for Flashing the BBB) External 5V Power Supply (for Flashing and Peripherals)Ethernet Cable (for Network Connection); HDMI Cable (for Connection to Monitors/Televisions); USB to Serial UART TTL 3.3 V (for Finding Problems); Optional Accessories; USB Hub (to Connect Several USB Devices to a USB Host); Micro-HDMI to VGA adapters (for VGA Video and Sound); Wi-Fi Adapters (for Wireless Networking); USB Webcam (for Capturing Images and Streaming Video); USB Keyboard and Mouse (for General-Purpose Computing); Capes; How to Destroy Your BeagleBone!; Summary; Support; Chapter 2 The BeagleBone Black Software Linux on the BeagleBoneLinux Distributions; Communicating with the

BBB; Installing Drivers; Network Connections; Internet-over-USB; Regular Ethernet; Ethernet Crossover Cable; Communicating with the BBB; Serial Connection over USB; Serial Connection with the USB-to-TTL 3.3 V Cable; Connecting through Secure Shell (SSH); Secure Shell Connections using PUTTY; Chrome Apps: Secure Shell Client; Transferring Files Using PuTTY/psftp over SSH; Controlling the BeagleBone; Basic Linux Commands; First Steps; Basic File System Commands; Environment Variables; Basic File Editing; What Time Is It? Package Management; Interacting with the BBB On-board LEDs; Shutdown; Node.js, Cloud9, and BoneScript; Introduction to Node.js; Introduction to the Cloud9 IDE; Introduction to BoneScript; Summary; Further Reading; Chapter 3 Exploring Embedded Linux Systems; Embedded Linux Basics; What Embedded Linux Offers; Is Linux Open Source and Free?; Booting the BeagleBone; The BeagleBone Bootloaders; Kernel Space and User Space; System V init (SysVinit); Managing Linux Systems; The Super User; System Administration; The Linux File System; Linking to Files and Directories; Users and Groups
File System Permissions
Exploring the File System; Commands for File Systems; find and whereis; more or less; Linux Commands; Standard Input and Output Redirection (>, >>, and <); Pipes (| and tee); Pipes (| and tee); Filter Commands (from sort to xargs); diff; tar; md5sum; Linux Processes; Controlling Linux Processes; Foreground and Background Processes; The BusyBox Multi-call Binary; Other Linux Topics; Git; Getting Started with Git; Cloning a Repository (git clone); Getting the Status (git status); Adding to the Staging Area (git add); Committing to the Local Repository (git commit); Pushing to the Remote Repository (git push)

Sommario/riassunto

In-depth instruction and practical techniques for building with the BeagleBone embedded Linux platform. Exploring BeagleBone is a hands-on guide to bringing gadgets, gizmos, and robots to life using the popular BeagleBone embedded Linux platform. Comprehensive content and deep detail provide more than just a BeagleBone instruction manual—you'll also learn the underlying engineering techniques that will allow you to create your own projects. The book begins with a foundational primer on essential skills, and then gradually moves into communication, control, and advanced applications using C/C++
