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Nota di contenuto	Chapter 1: Spotlight on Future Firmware -- Chapter 2: Tools -- Chapter 3: Infrastructure for Building Your Own System Firmware -- Chapter 4: System Firmware Debugging -- Chapter 5: Security in its Core -- Chapter 6: Looking into the Future of System Firmware -- Appendix A: Evolution of System Programming Language -- Appendix B: initramfs: Call for Type-Safe Language.
Sommario/riassunto	Build your own system firmware. This book helps you understand system firmware architecture and minimalistic design, and provides a specialized knowledge of firmware development. The book includes guidance on understanding the system firmware build procedure, integrating pieces of firmware and allowing configuration, updating system firmware, creating a development infrastructure for allowing multi-party collaboration in firmware development, and gaining advanced system firmware debugging knowledge. After reading the book you will be able to assume better control while developing your own firmware and know how to interact with native hardware while debugging. You will understand key principles for future firmware development using newer technology, and be ready for the introduction

of modern safe programming languages for firmware development. Detailed system firmware development case studies using a futuristic approach cover: Future scalable system firmware developmentmodels Types of firmware development (system firmware, device firmware, manageability firmware) Tools and their usage while creating system firmware How to build infrastructure for seamless firmware development using a multi-party development model Debugging methodologies used during various phases of firmware product development Setting up key expectations for future firmware, including thinner firmware footprints and faster execution time, easier configuration, and increased transparent security What You Will Learn Understand the system firmware working model of the future Gain knowledge to say goodbye to proprietary firmware for different types of firmware development Know the different types of tools required for creating firmware source code before flashing the final image into the boot device of the embedded system Develop skills to understand thefailure in firmware or in the system and prepare the debugging environment to root cause the defects Discern the platform minimal security requirement Optimize the system firmware boot time based on the target hardware requirement Comprehend the product development cycle using open source firmware development.