Synopsis

Up-to-the-Minute, Complete Guidance for Developing Embedded Solutions with Linux  
Linux has emerged as today’s #1 operating system for embedded products. Christopher Hallinan’s Embedded Linux Primer has proven itself as the definitive real-world guide to building efficient, high-value, embedded systems with Linux. Now, Hallinan has thoroughly updated this highly praised book for the newest Linux kernels, capabilities, tools, and hardware support, including advanced multicore processors. Drawing on more than a decade of embedded Linux experience, Hallinan helps you rapidly climb the learning curve, whether you’re moving from legacy environments or you’re new to embedded programming. Hallinan addresses today’s most important development challenges and demonstrates how to solve the problems you’re most likely to encounter. You’ll learn how to build a modern, efficient embedded Linux development environment, and then utilize it as productively as possible. Hallinan offers up-to-date guidance on everything from kernel configuration and initialization to bootloaders, device drivers to file systems, and BusyBox utilities to real-time configuration and system analysis. This edition adds entirely new chapters on UDEV, USB, and open source build systems. Tour the typical embedded system and development environment and understand its concepts and components. Understand the Linux kernel and userspace initialization processes. Preview bootloaders, with specific emphasis on U-Boot. Configure the Memory Technology Devices (MTD) subsystem to interface with flash (and other) memory devices. Make the most of BusyBox and latest open source development tools. Learn from expanded and updated coverage of kernel debugging. Build and analyze real-time systems with Linux. Learn to configure device files and driver loading with UDEV. Walk through detailed coverage of the USB subsystem. Introduces the latest open source embedded Linux build systems. Reference appendices include U-Boot and BusyBox commands.

Book Information

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About Me
To begin with I have had minimal experience with embedded Linux systems, but I have had experience in legacy C and C++, as well as Linux system administration.

Overview
The author is a very efficient writer and explains concepts in a very easy to understand, concise way. If you have had experience with C programming and basic Linux system administration you will understand the examples he presents and walks through. The author provides excellent examples in the form of diagrams and Linux command line screenshots that help to reinforce what is being explained. Furthermore, the author provides EXCELLENT resources at the end of each chapter to steer the reader towards more "in-depth" texts. These resources are incredibly useful as they serve to help keep the book up-to-date.

In Response to Other Reviews
- The author does provide links to community based embedded Linux systems in Chapter 2. and recommends the system he is running, for the examples seen throughout the book. - I agree that it would be nice to see more links and references to more community projects but it should in no way affect the potential buyer (the author provides plenty of examples, but take into account that the book is a static entry, he can't continuously update it to keep current with technology).

For the Potential Buyer
- This is a primer, do not expect a "cookbook" format, as that is not the intent of the author. The primer approach is meant to educate you on the big picture and prepare you to go into more depth. If you purchase this book with this in mind you will absolutely not be disappointed. - The author speaks clearly and simply to educate on the issues that are pertinent to embedded systems.

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