James K. Peckol

Hardcover ISBN: 978-1-119-45750-3 June 2019 $135.00

DESCRIPTION


Embedded systems are one of the foundational elements of today’s evolving and growing computer technology. From operating our cars, managing our smart phones, cleaning our homes, or cooking our meals, the special computers we call embedded systems are quietly and unobtrusively making our lives easier, safer, and more connected. While working in increasingly challenging environments, embedded systems give us the ability to put increasing amounts of capability into ever-smaller and more powerful devices.

*Embedded Systems: A Contemporary Design Tool, Second Edition* introduces you to the theoretical hardware and software foundations of these systems and expands into the areas of signal integrity, system security, low power, and hardware-software co-design. The text builds upon earlier material to show you how to apply reliable, robust solutions to a wide range of applications operating in today’s often challenging environments.

Taking the user’s problem and needs as your starting point, you will explore each of the key theoretical and practical issues to consider when designing an application in today’s world. Author James Peckol walks you through the formal hardware and software development process covering:

- Breaking the problem down into major functional blocks;
- Planning the digital and software architecture of the system;
- Utilizing the hardware and software co-design process;
• Designing the physical world interface to external analog and digital signals;

• Addressing security issues as an integral part of the design process;

• Managing signal integrity problems and reducing power demands in contemporary systems;

• Debugging and testing throughout the design and development cycle;

• Improving performance.

Stressing the importance of security, safety, and reliability in the design and development of embedded systems and providing a balanced treatment of both the hardware and the software aspects, *Embedded Systems: A Contemporary Design Tool, Second Edition* gives you the tools for creating embedded designs that solve contemporary real-world challenges.

---

**ABOUT THE AUTHOR**

**JAMES K. PECKOL, P HD** is a Principal Lecturer in the Department of Electrical Engineering at the University of Washington, Seattle, USA, where he has been named Teacher of the Year three times and Outstanding Faculty twice. He is also the founder of Oxford Consulting, Ltd., a product design and development consulting firm, is a member of *Who's Who in the World*, and has been presented with the Marquis *Who's Who* Lifetime Achievement Award.

---

For additional product details, please visit [https://www.wiley.com/en-us](https://www.wiley.com/en-us)