

<<逻辑与计算机设计基础>>

图书基本信息

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作者：马诺(M.Morris Mano),凯姆(Charles R.Kime)

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前言

The objective of this text is to serve as a cornerstone for the learning of logic design , digital system design , and computer design by a broad audience of readers . This fourth edition marks the decade point in the evolution of the text contents Beginning asanadaptationofapreviousbookbythefirstauthorin1997 . it continues to offer a unique combination of logic design and computer design principles with a strong hardware emphasis Over the years,the text has followed industry trends by adding new material such as hardware description language , removing or de-emphasizing material of declining importance , and revising material to track changes in computer technology and computer-aided design . In the fourth edition . revisions address pedagogical considerations as well as industrial trends . Sixty"real world"examples and problems,most drawn from design problems for products encountered in contemporary day-to . day life . Motivate interest and provide practice in solution formulation . Changes in chapter organization permit instructors to more easily tailor the degree of technology coverage , accommodating both electrical and computer engineering and computer science audiences.

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内容概要

本书从当代工程观点讲述了逻辑与计算机设计方面的内容，自出版以来已被全球超过25万人使用。本书以清晰的解释和逐步延伸的实例来帮助读者理解内容，实例涵盖了从简单的组合应用到建立在RISC内核基础上的CISC结构，更加重视培养读者在计算机辅助设计、问题形式化、解决方案验证和问题解决技巧方面的能力。

本书有丰富的教辅资源，包括部分习题答案、PPT、VHDL和Verilog代码以及补充阅读材料等，读者可登录华章网站（www.hzbook.com）下载。

本版更新内容

- 新增60个实例和习题。

- 新增和修改了40%的习题。

- 重新调整和组织了内容以适应不同的课程大纲。

- 技术内容的更新包括：
 - 简要介绍嵌入式系统。

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作者简介

作者:(美)Mano

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章节摘录

插图：You might ask：“How many embedded systems are there in my current living environment?” Do you have a cell phone? An iPod™? An Xbox™? A digital camera? A microwave oven? An automobile? All of these are embedded systems! In fact, a late-model automobile can contain more than 50 microcontrollers, each controlling a distinct embedded system, such as the engine control unit (ECU), automatic braking system (ABS), and stability control unit (SCU). Further, a significant proportion of these embedded systems communicate with each other through a CAN (controller area network). A new automotive network called FlexRay promises to provide high-speed, reliable communication for safety-critical tasks such as braking-by-wire and steering-by-wire, eliminating primary dependence on mechanical and hydraulic linkages and enhancing the potential for additional safety features such as collision avoidance. Table 1-1 lists examples of embedded systems classified by application area.

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编辑推荐

《逻辑与计算机设计基础(英文版·第4版)》简要介绍嵌入式系统,使用Espresso对实用的计算机辅助逻辑优化方法进行说明。

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