

<<嵌入式计算系统设计原理>>

图书基本信息

书名：<<嵌入式计算系统设计原理>>

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前言

Embedded computing is more important today than it was in 2000 . when the first edition of this book appeared . Embedded processors are in even more products , ranging from toys to airplanes . Systems-on-chips now use up to hundreds of CPUs . The cell phone is on its way to becoming the new standard computing platform . As my column in IEEE Computer in September 2006 indicated . there are at least a half-million embedded systems programmers in the World today, probably closer to 800,000 . In this edition I have tried to both update and revamp . One major change is that the book now uses the TI TMS320C55x™(C55x) DSP. I seriously rewrote the discussion of real-time scheduling . I have tried to expand on performance analysis as a theme at as many levels of abstraction as possible . Given the importance of multiprocessors in even the most mundane embedded systems , this edition also talks more generally about hardware / software co-design and multiprocessors . One of the changes in the field is that this material is taught at lower and lower levels of the curriculum . What used to be graduate material is now upper-division undergraduate ; some of this material will percolate down to the sophomore level in the foreseeable future . I think that you can use subsets of this book to cover both more advanced and more basic courses . Some advanced students may not need the background material of the earlier chapters and you can spend more time on software performance analysis , scheduling , and multiprocessors . When teaching introductory courses , software performance analysis is an alternative path to exploring microprocessor architectures as well as software ; such courses can concentrate on the first few chapters . The new Web site for this book and my other books is [http : //www . waynewolf . us](http://www.waynewolf.us) . On this site , you can find overheads for the material in this book , suggestions for labs . and links to more information on embedded systems .

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内容概要

本书从组件技术的视角出发，介绍了嵌入式系统设计技术和技巧。

本书第1版已被广泛应用于教学，可以说在很大程度上引发了嵌入式系统课程的创立，并为实践设计提供了宝贵指南。

第2版根据最先进的技术发展进行了更新。

不论是进行软硬件设计的研究人员、学生还是专家，都能从Wayne Wolf的集成化工程设计方法中获益匪浅。

本书主要特点：以实际芯片(ARM芯片和TI C55x DSP)为例，进行相关设计技术和技巧的说明，向读者介绍如何将这些理论付诸于设计实践。

在所有关键课题讨论中都尤为强调现实中的设计实践，从而为学生和设计人员提供了最先进技术的指导。

对设计实践中所必需的基本应用技术进行重点讨论，帮助读者在实际工作中熟练地设计大型的、复杂的嵌入式系统。

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作者简介

Wayne Wolf，拥有斯坦福大学电气工程博士学位，曾执教于普林斯顿大学，现任职于GeorgiaTech公司。

在1989年加入普林斯顿大学之前，他曾在AT & T贝尔实验室工作。

他是IEEE和ACM会员、IEEE计算机协会核心成员以及ASEE和SPIE成员。

Wolf教授于2003年获得TASEE Frederick E . Ter

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