

<<计算机组织与结构>>

图书基本信息

书名：<<计算机组织与结构>>

13位ISBN编号：9787040282542

10位ISBN编号：7040282542

出版时间：2009-11

出版时间：高等教育出版社

作者：斯托林

页数：754

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<计算机组织与结构>>

内容概要

本书介绍计算机的结构和功能，旨在尽量清晰、完整地介绍现代计算机系统的本质和特性。

尽管计算机领域存在着产品的多样性以及变革迅速的特点，但一些基本的概念依然适用。

这些概念的应用取决于技术的当前发展状况以及设计者希望实现的价格 / 性能目标。

本书的目的是详细讨论计算机组织与结构的基本原理，并将这些基本原理与目前的设计问题关联起来

。

<<计算机组织与结构>>

书籍目录

Web Site for the Book Preface PART ONE OVERVIEW Chapter 1 Introduction 1.1 Organization and Architecture 1.2 Structure and Function 1.3 Why Study Computer Organization and Architecture? Chapter 2 Computer Evolution and Performance 2.1 A Brief History of Computers 2.2 Designing for Performance 2.3 Pentium and PowerPC Evolution 2.4 Recommended Reading 2.5 Key Terms, Review Questions, and Problems PART TWO THE COMPUTER SYSTEM Chapter 3 A Top-Level View of Computer Function and Interconnection 3.1 Computer Components 3.2 Computer Function 3.3 Interconnection Structures 3.4 Bus Interconnection 3.5 PCI 3.6 Recommended Reading 3.7 Key Terms, Review Questions, and Problems Appendix 3A Timing Diagrams Chapter 4 Cache Memory 4.1 Computer Memory System Overview 4.2 Cache Memory Principles 4.3 Elements of Cache Design 4.4 Pentium 4 and PowerPC Cache Organizations 4.5 Recommended Reading 4.6 Key Terms, Review Questions, and Problems Appendix 4A Performance Characteristics of Two-Level Memories Chapter 5 Internal Memory 5.1 Semiconductor Main Memory 5.2 Error Correction 5.3 Advanced DRAM Organization 5.4 Recommended Reading 5.5 Key Terms, Review Questions, and Problems Chapter 6 External Memory 6.1 Magnetic Disk 6.2 RAID 6.3 Optical Memory 6.4 Magnetic Tape 6.5 Recommended Reading 6.6 Key Terms, Review Questions, and Problems Chapter 7 Input/Output 7.1 External Devices 7.2 I/O Modules 7.3 Programmed I/O 7.4 Interrupt-Driven I/O 7.5 Direct Memory Access 7.6 I/O Channels and Processors 7.7 The External Interface: FireWire and InfiniBand 7.8 Recommended Reading 7.9 Key Terms, Review Questions, and Problems Chapter 8 Operating System Support 8.1 Operating System Overview 8.2 Scheduling 8.3 Memory Management 8.4 Pentium II and PowerPC Memory Management 8.5 Recommended Reading 8.6 Key Terms, Review Questions, and Problems PART THREE THE CENTRAL PROCESSING UNIT Chapter 9 Computer Arithmetic 9.1 The Arithmetic and Logic Unit 9.2 Integer Representation 9.3 Integer Arithmetic 9.4 Floating-Point Representation 9.5 Floating-Point Arithmetic 9.6 Recommended Reading 9.7 Key Terms, Review Questions, and Problems Chapter 10 Instruction Sets: Characteristics and Functions 10.1 Machine Instruction Characteristics 10.2 Types of Operands 10.3 Pentium and PowerPC Data Types 10.4 Types of Operations 10.5 Pentium and PowerPC Operation Types 10.6 Assembly Language 10.7 Recommended Reading 10.8 Key Terms, Review Questions, and Problems Appendix 10A Stacks Appendix 10B Little-, Big-, and Bi-Endian Chapter 11 Instruction Sets: Addressing Modes and Formats Chapter 12 Processor Structure and Function Chapter 13 Reduced Instruction Set Computers Chapter 14 Instruction-Level Parallelism and Superscalar Processors Chapter 15 The IA-64 Architecture PART FOUR THE CONTROL UNIT Chapter 16 Control Unit Operation Chapter 17 Microprogrammed Control PART FIVE PARALLEL ORGANIZATION Chapter 18 Parallel Processing Appendix A Number Systems Appendix B Digital Logic Appendix C Projects for Teaching Computer Organization and Architecture Glossary References Index

<<计算机组织与结构>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>