

ART OF EMBEDDED SYSTEM DESIGN

Bobby

February 8, 2018

Part I

PREFACE

In these book, I will summerize all I know about the embedded system, and give some practical electronic designs what I have done in my career. Also, I want to improve the ability of using \LaTeX by myself. This book is in the public domain. All the copyrights are under GPL 2.0. Thanks all for your attentions! All the materials are from books, internet, etc. I will list as much references as possible, but I am not sure that I can list all. For any improper or defects, your suggurestions are warmly welcomed.

Best Regards!

Contents

I	PREFACE	i
II	Physics	1
1	Solid state physics	3
2	Semiconductor physics	5
3	Solid state physics	7
4	Semiconductor physics	9
III	Circuit basics	11
IV	Analog circuit	13
5	Transistor circuit analysis	15
6	Transistor circuit design	17
7	FET circuit analysis	19
8	FET circuit design	21
V	Analog VLSI design	23
9	Current source	25
10	Current mirror	27
11	Differential amplifier pair	29
12	OP AMP design	31

VI	Digital circuit	33
13	Finite state machine	35
VII	Analog digital converter	37
VIII	Verilog HDL	39
IX	Digital VLSI	41
14	CPU design	43
X	PCB design	45
XI	PCB SI&PI	47
XII	C and C++ programming	49
XIII	Data structure and algorithms	51
XIV	Computer orgnization	53
XV	Computer architecture	55
15	Microcontroller	57
16	Digital signal processor	59
17	ARM processor	61

<i>CONTENTS</i>	vii
XVI Operating system	63
XVII Linux administration	65
XVIII Linux kernel	67
XIX Linux driver development	69
XX Linux system porting	71
18 Buildroot	73
XXI Computer Network	75
19 TCP/IP protocols	77
20 Socket programming	79
XXII Signal and system	81
XXIII Ditial signal processing	83
21 FFT	85
22 FIR	87
23 IIR	89
XXIV Digital image processsing	91
XXV Audio signal processing	93
XXVI Modal analysis	95
XXVII Project Development	99
24 8-channel data acquistion system design	101

25	32-channel data acquisition system design	103
26	64-channel data acquisition system design	105
XXVIII	Appendix	107
27	Basic mathematics	109
27.1	Formulas	109

Part II

Physics

Chapter 1

Solid state physics

In this chapter, will discuss the solid state physics, mainly about the basic fundamentals.

Chapter 2

Semiconductor physics

Chapter 3

Solid state physics

Chapter 4

Semiconductor physics

Part III

Circuit basics

Part IV

Analog circuit

Chapter 5

Transistor circuit analysis

Chapter 6

Transistor circuit design

Chapter 7

FET circuit analysis

Chapter 8

FET circuit design

Part V

Analog VLSI design

Chapter 9

Current source

Chapter 10

Current mirror

Chapter 11

Differential amplifier pair

Chapter 12

OP AMP design

Part VI

Digital circuit

Chapter 13

Finite state machine

Part VII

Analog digital converter

Part VIII

Verilog HDL

Part IX

Digital VLSI

Chapter 14

CPU design

Part X

PCB design

Part XI

PCB SI&PI

Part XII

C and C++ programming

Part XIII

Data structure and algorithms

Part XIV

Computer organization

Part XV

Computer architecture

Chapter 15

Microcontroller

Chapter 16

Digital signal processor

Chapter 17

ARM processor

Part XVI

Operating system

Part XVII

Linux administration

Part XVIII

Linux kernel

Part XIX

Linux driver development

Part XX

Linux system porting

Chapter 18

Buildroot

Part XXI

Computer Network

Chapter 19

TCP/IP protocols

Chapter 20

Socket programming

Part XXII

Signal and system

Part XXIII

Digital signal processing

Chapter 21

FFT

Chapter 22

FIR

Chapter 23

IIR

Part XXIV

Digital image processing

Part XXV

Audio signal processing

Part XXVI

Modal analysis

Table 23.1:

11	1	12	4	6

Table 23.1 indicate that

The universe is immense and it seems to be homogeneous, in a large scale, everywhere we look at.

furnished his toy with a romantic legend about a much larger "Tower of Brahma", which supposedly has 64 disks of pure gold —wow.

Are our disks made of concrete? resting on three diamond needles. At the beginning of time, he said, "God" placed these golden disks on the first needle and ordained that a group of priests should transfer them to the third, according to the rules above. The priests reportedly work day and night at their task. When they finish, the Tower will crumble and the world will end.

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Part XXVII

Project Development

Chapter 24

8-channel data acquisition system design

Chapter 25

32-channel data acquisition system design

Chapter 26

64-channel data acquisition system design

Part XXVIII

Appendix

Chapter 27

Basic mathematics

27.1 Formulas

$$a + b = b + a$$

appendix test