

ISSN 1002-2279  
CN21-1216 / TP

★ 中国科技核心期刊

# 微 处 理 机

## MICROPROCESSORS

5  
第34卷

2013 ■

ISSN 1002-2279



9 771002 227030

中国电子科技集团公司第四十七研究所主办

# MICROPROCESSORS

No. 5 2013

Vol. 34 Total 161

## CONTENTS

### An All-CMOS Temperature Compensated Voltage

and Current Reference ..... ZHAO Zhe, CHEN Lan, LV Zhi-qiang, WANG Hai-yong ( 1 )

Radiation Hardened Measurement of Resistance to SEU ..... YANG Ju-jin, LIU Yi-kai ( 4 )

Spin Valve CMR Sensor for Weak Magnetic Field Detection in Aerospace ..... JIN Lei, LIU Xiao-pan, SONG Dong-dong ( 6 )

The ASIC Design for Remote Capture ..... ZHANG Zhen-hua, WANG Huan (10)

Study on Abnormal Phenomenons on Metal Quality of SBD ..... LIU De-shi, ZHANG Peng-yuan (14)

Diameter Detection for Crystals Growth Based on Image Processing ..... CHENG Guang-wei, LI Hong-xiu (16)

Study on Irradiation Characteristics of Devices in Sub-micrometer Memory ..... WANG Jia-ning, JING Xin, LU Hong (20)

Design on Embedded MCU Hardware ..... NIU Ying-shan, WANG Dan (25)

Research on Discrete Cosine Transform in Cardiac Electrical Signal Data Compression ..... SHANG Yu, MEI Cui-song (29)

Research of P2P Streaming Media System Based on Adaptive Algorithm ..... WANG Li-fen, HAN Zi-heng (32)

### Research on Physical Random Access Channel Preamble Detection

ased on LTE ..... HUANG Tong-juan, KANG Gui-hua, QI Bai, ZHOU Wen-bo (35)

A Design for Wireless Control and Motor Show Module System Based on CC430 ..... WEI Hong-li, YANG Wei (38)

Design of Video Rearview System Based on Android ..... MA Sheng, JIANG Bing, XIE Jian-feng (41)

Research of a Multi-NIC Forwarding Technology Base on NDIS IMD ..... ZHANG Yi-kui, CHENG Lin (46)

### Study on Maneuvering Target Simulation Based on Kalman Adaptive

Filtering Algorithm ..... LIU Zhou-zhou, WANG Yu-hui, WANG Guo-shu (50)

Study on Real Switching Technology in Virtual Reality ..... SHAO Gang, QU Bao-ping, CAO Peng, LIU Ming-zhi (53)

Summary of the JPEG2000 Image Codec ..... ZHANG Tian-en, DU Qi-cai, CHEN Wei, LIN Jia-yu (57)

Research and Implementation of Unified Users Management Based on LDAP ..... DONG Wen-wei (60)

### The Research and Application of Tax Customer Classification

Based on K-means Algorithm ..... ZHU Jian, YU Xiao-han, LU Bing-liang (63)

Design of Digital Monitoring and Receiving System of Rail Vibration Signal Based on FPGA ..... GONG Jian, LIU Ji (66)

Design of Smart Control System for Infusion Based on Wireless Module PTR8000 ..... SHI Hui-jing, HU Rong (70)

Design of Control System for Indoor Environmental Base on uVsion ..... HUANG Shi-huang, LIU Zheng (73)

Network Node Design Based on the Magnetostrictive Level Gauge Measuring the Tank Level ..... YANG Yong, YAO Yong-le (76)

### Video Capture and Replay Technology in Application

of Sports Competition System ..... NIU Jian, MU Yan, KE Dong-fang, JIN Chao (79)

Design of Alkaline Manganese Battery Performance Detector Based on Single Chip Microcomputer ..... ZHOU Yun, FAN Li (84)

### Design of Competition Information Collection System Based

on Android ..... LAN Fan, WANG Ping, BAI Wei-wei, JIANG Ling-xia (88)

Detection of Film Thickness Based on Digital Filtering Technique ..... CAO Sheng-mei, HE Ping, LI Qi, HUA Nan (93)

# 微 处 理 机

第 34 卷

2013 年第 5 期

(总第 161 期)

## 目 次

### · 大规模集成电路设计、制造与应用 ·

- 全 CMOS 温度补偿的参考电压电流源 ..... 赵 喆,陈 岚,吕志强,王海永 (1)  
抗单粒子翻转的加固方法 ..... 杨菊瑾,刘义凯 (4)  
用于空间弱磁场检测的自旋阀型 GMR 传感器 ..... 金 磊,刘小磐,宋东东 (6)  
遥测采集专用芯片设计 ..... 张振华,王 涣 (10)  
肖特基二极管金属质量问题研究 ..... 刘德实,张鹏远 (14)  
基于图像处理的晶体生长直径检测技术 ..... 程光伟,李洪秀 (16)  
深亚微米存储器各器件辐照特性研究 ..... 王佳宁,景 欣,陆 虹 (20)  
嵌入式 MCU 硬件设计概述 ..... 牛英山,王 丹 (25)

### · 微机网络与通信 ·

- 离散余弦变换在心电信号压缩中的应用研究 ..... 尚 宇,梅翠松 (29)  
基于 P2P 的网络流媒体系统及其自适用算法研究 ..... 王丽芬,韩紫恒 (32)  
基于 LTE 的物理随机接入信道前导检测研究 ..... 黄铜娟,康桂华,齐 柏,周文波 (35)  
基于 CC430 的无线控制车展模块系统设计 ..... 韦宏利,杨 威 (38)  
基于 Android 的可视倒车系统设计 ..... 马 胜,江 冰,谢剑锋 (41)  
基于 NDIS 中间层的多网卡转发技术研究 ..... 章亦葵,程 林 (46)

### · 微机软件 ·

- 基于卡尔曼自适应滤波算法的机动目标仿真研究 ..... 刘洲洲,王禹辉,王国树 (50)  
虚拟现实中的实景视频切换技术研究 ..... 邵 刚,屈保平,曹 鹏,刘明智 (53)  
JPEG2000 图像编码综述 ..... 张天恩,杜奇才,陈 巍,林嘉宇 (57)  
基于 LDAP 的统一用户管理研究与实现 ..... 董文炜 (60)  
基于 K-means 算法的税务客户分类研究与应用 ..... 朱 健,于晓寒,卢秉亮 (63)

### · 微机应用 ·

- 基于 FPGA 的轨道振动信号数字监测接收机设计 ..... 龚 健,刘 继 (66)  
基于无线模块 PTR8000 的智能输液控制系统设计 ..... 时慧晶,胡 榕 (70)  
基于 uVSION 的室内环境监控系统设计 ..... 黄仕凰,刘 政 (73)  
基于磁致伸缩液位仪的油罐液位网络节点设计 ..... 杨 勇,姚永乐 (76)  
视频采集与回放技术在体育信息系统中的应用 ..... 钮 健,牟 艳,客东方,金 超 (79)  
基于单片机技术的碱锰电池性能检测仪设计 ..... 周 芸,范 丽 (84)  
基于 Android 平台的竞赛信息采集终端设计 ..... 兰 帆,王 萍,白维维,姜玲霞 (88)  
基于数字滤波技术的薄膜厚度在线检测 ..... 曹胜梅,何 平,李 岐,华 楠 (93)  
投稿须知 ..... (96)

期刊基本参数:CN21-1216/N \* 1979 \* b \* A4 \* 96 \* zh \* p \* ¥15.00 \* 1000 \* 27 \* 2013-10