

计算机测量与控制

3

COMPUTER MEASUREMENT & CONTROL

2014

中国计算机自动测量与控制技术协会主办

第22卷

值得信赖的 测量专家



NI数据采集系列产品是特别值得信赖的基于计算机的测量设备，它具备出众的精准度和卓越的性能。NI CompactDAQ系统拥有超过50种用于特定测量的模块和完整的I/O类型。该系统平台结合NI LabVIEW软件的分析 and 信号处理能力，能够根据您的指令进行图形化系统设计，从而更快地搭建测量系统。

LabVIEW针对各类传感器信号提供了强大的分析函数，简化了GUI开发，让您以图形化方式随心所欲地进行编程。



800-820-3622 | ni.com/daq/zhs

了解如何提高开发效率

NI产品在线购买
方便快捷 更优惠

china.ni.com/howtobuy



NATIONAL INSTRUMENTS™

NI上海 中国区总部
电话: (021) 5050 9800
传真: (021) 6555 6244
E-mail: china.info@ni.com

NI北京
电话: (010) 8262 5966
传真: (010) 8286 2099

NI广州
电话: (020) 2201 6899
传真: (020) 2201 6898

NI香港
电话: (852) 2645 3186
传真: (852) 2686 8505
E-mail: general@nihk.com.hk



目次 (Contents)

编委会顾问: 梁恩杰院士 张履谦院士 陈定昌院士

社长: 奚全生

副社长: 肖登伟

编委会主任: 于滨

编委会副主任: 奚全生 杨俊

编委会委员 (按姓氏笔画排序):

- 于功松 于劲松 马建伟 王迎春
- 王盼御 王云亮 王政平 王海亮
- 王巨永 王邓璐 王付平 王付梦
- 支超有 冯克明 卢皓何 仪刚 枫军
- 左毅杰 冯小强 刘立才 刘武刚 刘衍
- 刘嘉洪 刘国新 刘学强 刘李权 李杰
- 朱纪洪 李树盛 李张绪 李东军 李长
- 李学文 李树盛 李张绪 李东军 李长
- 张张宏 张宏军 张宏军 张宏军
- 张苏琼 张苏琼 张苏琼 张苏琼
- 杨凯杨 杨凯杨 杨凯杨 杨凯杨
- 陈元柏 陈元柏 陈元柏 陈元柏
- 周召发 周召发 周召发 周召发
- 侯立宏 侯立宏 侯立宏 侯立宏
- 徐少宏 徐少宏 徐少宏 徐少宏
- 耿建军 耿建军 耿建军 耿建军
- 崔少宏 崔少宏 崔少宏 崔少宏
- 蔡建斌 蔡建斌 蔡建斌 蔡建斌
- 魏纳新 魏纳新 魏纳新 魏纳新

主 编: 苟永明

副 编: 孟汉城

英文编辑: 杨力生

编辑部: 白春安 任旺芳 唐德生 顾捷

广告部: 孙颖

主管单位: 中国航天科工集团公司

主办单位: 中国计算机自动测量与控制技术协会

编辑出版: 《计算机测量与控制》杂志社

通讯地址: 北京市海淀区阜成路甲8号

航天科工大厦四层

邮政编码: 100048

电 话: 主编室: (010) 68371578

编辑部: (010) 68371556转12-23

广告部: (010) 68767886

财务部: (010) 68370689

传 真: (010) 68372068/68767886

电子邮箱: ck@chinamca.com

投稿网址: www.chinamca.com

印 刷: 北京时尚印佳彩色印刷有限公司

总发行处: 北京报刊发行局

订 阅 处: 全国各地邮局

邮发代号: 82-16

ISSN 1671-4598

刊 号: CN 11-4762/TP

国外发行: 中国国际图书贸易总公司

(北京399信箱 100044)

国外代号: M1480

广告经营许可证: 京海工商广字第8179号(1-1)

帐 户: 《计算机测量与控制》杂志社

帐 号: 11001085400059612076

开户银行: 建行北京阜成路支行

出版日期: 2014年3月25日

国内定价: 每期定价25.00元/册

国外定价: 全年84美元

港澳台全年定价480元(含邮资)

本期责任编辑: 白春安

版权所有, 未经同意, 不得转载。

万方数据

· 综述与评论 · Summary and Comment

第三次工业革命与“软件制造”及“云智慧科技” 应怀樵, 沈松, 李旭杰 (646)
Third Industrial Revolution and Software Manufacture, and Cloud Smart Science Technology Ying Huaqiao, Shen Song, Li Xujie (646)

· 自动化测试技术 · Automatic Measurement Technology

基于案例和规则融合的某型航空发动机故障诊断专家系统 李洪伟, 谢镇波, 李明 (650)
Fault Diagnosis Expert System for Air-Engine Based on Integration of Case and Rule Reasoning Li Hongwei, Xie Zhenbo, Li Ming (650)

电冲击加速退化试验的雷达电路板故障趋势预测方法研究 李伟, 梁玉英, 蔡金燕, 等 (653)
Radar Circuit Board Fault Prediction Method Based on Electric Impact Accelerate Degradation Test System Li Wei, Liang Yuying, Cai Jinyan, et al (653)

基于动态贝叶斯网络的机载电子设备故障诊断 周德新, 蒋红菊 (656)
Research and Realization of Digital Card Test-equipment for Flight Control Computer Zhou Dexin, Jiang Hongju (656)

基于中断影响分析的软件集成测试策略 卢德中, 林晓欲 (659)
A Integration Testing Strategy Based on Analysis of Interrupt Effect Lu Dezhong, Lin Xiaoyu (659)

基于灰色区间的神经网络在复杂系统故障诊断中的应用 牛伟, 成娟, 毛宁, 等 (664)
Application of Neural Network to Complex System Fault Diagnosis Based on Grey Area Niu Wei, Cheng Juan, Mao Ning, et al (664)

一种飞控计算机DCT的研究与实现 崔强 (667)
Research and Realization of Digital Card Test-equipment for Flight Control Computer Cui Qiang (667)

调陀螺仪离线预测与健康管理系统的设计 吴明辉, 孟上, 张波, 等 (670)
Design of Prognostics and Health Management System for Dynamically Tuned Gyroscope Wu Minghui, Meng Shang, Zhang Bo, et al (670)

控制和保护开关电器电子线路板检测系统设计与实现 吴正阳, 徐惠钢, 谢启, 等 (674)
Design and Realization of Control and Protective Switching Device Circuit Board Test System Wu Zhengyang, Xu Huigang, Xie Qi, et al (674)

舰用柴油机测试性指标分配方法研究 周志才, 刘东风, 石新发 (677)
Research on Testability Index Distribution of Marine Diesel Engine Zhou Zhicai, Liu Dongfeng, Shi Xinfu (677)

基于机器视觉的贴片LED极性检测系统的设计 战荫伟, 黄治登 (680)
Design of Detection System of SMD LED Polarity Based on Machine Vision Zhan Yinwei, Huang Zhideng (680)

基于运动检测的旋翼共锥度测量方法 齐美彬, 陆磊, 李新民, 等 (684)
Measurement Method for Rotor Common Taper Based on Motion Detection Qi Meibin, Lu Lei, Li Xinmin, et al (684)

基于微控制器的嵌入式边界扫描解决方案 杜彬, 李洋, 徐鹏程, 等 (686)
Embedded Boundary-scan Solution Based on MCU Du Ying, Li Yang, Xu Pengcheng, et al (686)

基于最小二乘支持向量机的卫星异常检测方法 陈冰, 鲁刚, 房红征, 等 (690)
Method of Satellite Anomaly Detection Based on Least Squares Support Vector Machine Chen Bing, Lu Gang, Fang Hongzheng, et al (690)

一种优化的电动汽车电池动态SOC参数测量方法 曾博文 (693)
An Optimization of Electric Car Battery SOC Dynamic Parameter Measurement Method Zeng Bowen (693)

基于RS和DWT-IOSVM的模拟电路故障诊断 郑晓菁 (697)
Fault Diagnosis of Analog Circuit Based on Rough Set and DWT-IOSVM Zheng Xiaojing (697)

基于动态云QNN的污水出水水质在线预测方法 马亮, 杨萍萍, 谷学静, 等 (700)
Online Prediction Method for Sewage Discharge Quality Based on Dynamic Cloud-Quantum Neural Network Ma Liang, Yang Pingping, Gu Xuejing, et al (700)

基于DSP的管道泄漏信号检测系统的设计 张保钦, 雷保珍, 郑业明, 等 (703)
Detection Instrument Design of Pipeline Leakage Signal Based on DSP Zhang Baoqin, Lei Baozhen, Zheng Yeming, et al (703)

基于分布式无线传感网络的城市空气质量监测系统设计 李丽辉, 傅琪扬 (706)
Design of Air Quality Monitoring System Based on Distributed Wireless Sensing Network Li Lihui, Fu Qiyang (706)

基于核主成分分析和RVM的传感器故障诊断算法设计 郭秀峰, 任贺宇 (709)
Design of Fault Diagnosis Algorithm for Sensor Node Based on Kernel Principal Component Analysis and RVM Guo Xiufeng, Ren Heyu (709)

· 控制技术 · Control Technology

基于DSP技术的排险机器人车体控制系统 陈朝大, 杜启亮, 秦传波, 等 (713)
Control System of Eod Robot Body Based on DSP Technology Chen Chaoda, Du Qiliang, Qin Chuanbo, et al (713)

基于传感网的新型智能照明控制器设计 王志强, 刘波, 张乐然 (716)
Design of New Intelligent Lighting Controller Based on Wireless Sensor Network Wang Zhichao, Liu Bo, Zhang Leran (716)

基于自适应模糊逻辑的粮仓监控系统研究 李文琛, 王志明, 查颖 (718)
Research of Granary Monitoring System Based on Adaptive Fuzzy Logic Li Wenchen, Wang Zhiming, Zha Ying (718)

具有H_∞性能的机械手神经自适应跟踪控制 蔡壮, 张国良, 田琦 (720)
Neural Adaptive Tracking Control of Manipulators with H_∞ Tracking Performance Cai Zhuang, Zhang Guoliang, Tian Qi (720)

基于ADS-33E的直升机解耦控制律设计与仿真 刘宇亮, 卢京潮 (723)
Helicopter Decoupling Control Law Design and Simulation Based on ADS-33E Liu Yuliang, Lu Jingchao (723)

基于H_∞理论的LPG发动机空燃比控制系统研究与开发 崔宏巍 (727)
Research and Development of Air Fuel Ratio Control System in LPG Automotive Engine Based on H_∞ Theory Cui Hongwei (727)

塔架式抽油机智能控制系统设计 郭本振, 杨晶晶, 郝尚富 (730)
Design of Tower-Type Pumping Unit Intelligent Control System Guo Benzhen, Yang Jingjing, Hao Shangfu (730)

基于nRF24L01的pH值监控系统的设计 张坤, 薛文玲, 王振朝, 等 (734)
Design of pH Monitoring System Based on nRF24L01 Zhang Kun, Xue Wenling, Wang Zhenchao, et al (734)

掘进机器人巷道断面记忆控制策略研究 王福忠, 张付凯 (737)
Research on Boring Robot Roadway Section Memory Cutting Control Strategy Wang Fuzhong, Zhang Fukai (737)

时滞离散系统的模糊-最优跟踪控制 侯一民, 刘玉琼, 陈艳虎 (741)
Fuzzy-optimal Output Tracking Control for Discrete-time Delay System Hou Yimin, Liu Yuqiong, Chen Yanhu (741)

无人飞机发动机气道风门开度模糊控制算法研究 成坚, 曹诚, 鲍传美, 等 (745)
UAV Motor Inlet Opening Control Model based on Fuzzy Inference Cheng Jian, Cao Cheng, Bao Chuanmei, et al (745)

压阻式压力传感器在喷码控制系统中的应用 高振斌, 张晖, 潘星 (748)
Application of Piezoresistive Pressure Sensors in Printers Control System Gao Zhenbin, Zhang Hui, Pan Xing (748)

一种融合WSN的现场总线控制系统多协议控制器 金红, 蒋存雷, 项春雷, 等 (751)
Fieldbus Control System Protocols Controller Mixing WSN Jin Hong, Jiang Cunbo, Xiang Chunlei, et al (751)

- 基于视觉特征库的交互控制方法.....徐增敏, 关健, 蒋英春, 等 (754)
An Interactive Control Method Based on Vision Feature Library.....Xu Zengmin, Guan Jian, Jiang Yingchun, et al (754)
- 基于Fuzzy-PID嵌入式平台调平控制器设计.....董海迪, 何华锋, 郑建飞, 等 (758)
Design of an Embedded Leveling Controller for Inertial Platform Based on Fuzzy-PID.....Dong Haidi, He Huafeng, Zheng Jianfei, et al (758)
- 基于STM32的四旋翼姿态控制系统.....卢秀和, 李建波 (761)
Four Rotor Attitude Control System Based on STM32.....Lu Xiuhé, Li Jianbo (761)
- 基于改进蚁群算法的立体车库群控调度实现.....马昌威 (764)
Achieving the Dispatching of Group Control Stereoscopic Garage Based on Improved Ant colony Algorithm.....Ma Changwei (764)
- 改进灰色预测PID及EPS试验台扭矩加载系统控制.....胡斌, 白国振 (769)
Improved Grey Prediction PID and Control of Torque Loading System of EPS Test Platform.....Hu Bin, Bai Guozhen (769)
- 电梯温湿度测控系统研究.....闫海英, 黄波, 王晓喙 (773)
Research of Elevator Temperature and Humidity Monitoring and Control System.....Yan Haiying, Huang Bo, Wang Xiaonan (773)

· 军事装备测控技术 · Military Equipment Technology in Measurement and Control

- 基于测试诊断一体化技术的雷达导引头技术支持系统设计.....杜江, 李淼, 王天辉 (775)
Design of Technology Supporting System of Radar Seeker Based on Incorporated Test and Diagnosis.....Du Jiang, Li Miao, Wang Tianhui (775)
- 基于消光比的机载多脉冲激光雷达性能综合测试系统研制.....王杰, 金秋春, 马鹏阁, 等 (778)
Development of Airborne Multiple Impulse Laser Radar Performance Integrated Test System Based on Extinction Ratio.....Wang Jie, Jin Qiuchun, Ma Pengge, et al (778)
- 俯仰/偏航式半捷联导引头光学平台稳定控制技术.....李雪芹, 卢晓东, 周军, 等 (781)
Stable Control Technology of Optical Platform for Pitch/yaw Semi-strapdown Seeker.....Li Xueqin, Lu Xiaodong, Zhou Jun, et al (781)
- 大型船载测控雷达主副瓣跟踪识别技术及其实现.....丁凤海, 季燕青, 沈小青, 等 (784)
Realization of Identification of Mainlobe and Sidelobe Tracking for Large Shipborne TT & C Radar.....Ding Fenghai, Ji Yanqing, Shen Xiaoqing, et al (784)
- 便携式雷达天线系统测试与控制平台的设计.....董华, 温倩, 初晓军 (787)
Design of Portable Testing and Controlling Platform of Antenna System.....Dong Hua, Wen Qian, Chu Xiaojun (787)
- 基于USB的便携式导弹遥测舱数据采集系统设计.....付斌, 丁月宁, 黄勇, 等 (790)
Design of Portable Data Acquisition System of Missile Telemetry Bay Based on USB.....Fu Bin, Ding Yueying, Huang Yong, et al (790)
- 一种改进的炮身管指向视觉测量方法.....苏建东, 段修生, 肖晶 (793)
An Improved Vision Measurement for the Pose of Cannon Barrel.....Su Jiandong, Duan Xiusheng, Xiao Jing (793)
- 空空导弹故障诊断专家系统研究.....闫华 (796)
Research on Expert System of Fault Diagnosis for Air-to-Air Missile.....Yan Hua (796)

· 试验与评价技术 · Test & Evaluation Technology

- 基于云重心法的发射场液压泵的健康状态评估.....路广勋, 李建增, 李鹏俊 (800)
State Assessment of the Hydraulic Pump of Launch Site Based on Cloud Gravity Evaluation.....Lu Guangxun, Li Jianzeng, Li Pengjun (800)
- 基于QPSO-WNN算法的煤矿工人可靠性预测模型研究.....李鑫, 李乃文, 杨桢, 等 (803)
Research on Prediction Model of Coal Mine of Human Reliability Based on QPSO-WNN Algorithm.....Li Xin, Li Naiwen, Yang Zhen, et al (803)

· 算法、设计与应用 · Algorithm, Design and Application

- 改进的MIMO系统变步长小波常模盲均衡算法.....高亚兰, 郭业才, 吴珊 (807)
Improved Wavelet Transformation Variable Step Size Blind Equalization Algorithm of MIMO System.....Gao Yalan, Guo Yecai, Wu Shan (807)
- 基于分跳跳距和粒子群优化算法的DV-Hop定位算法改进.....王康, 王峰, 蒋霞珍 (810)
Improved DV-Hop Algorithm Based on Separate-Hop Hop Distance and Particle Swarm Optimization Algorithm.....Wang Kang, Wang Feng, Jiang Fuzhen (810)
- 欧氏几何LDPC长码的卫星通信编码方案研究.....马明晓, 安军社 (813)
Research on Long Euclidean Geometry-Based LDPC Coding Scheme for Satellite Communications.....Ma Mingxiao, An Junshe (813)
- 防电磁泄漏HDL通信卡的设计与实现.....潘纯娣, 胡晓吉 (816)
Design and Implementation of HDLC Communication Card with the Ability of Preventing Leakage of Electromagnetic.....Pan Chundi, Hu Xiaojie (816)
- 基于Markov流量预测和改进蚁群算法的分簇自适应路由.....孙亮 (820)
Adaptive Cluster Routing Based on Markov Flow Prediction and Improved Ant Colony Algorithm.....Sun Liang (820)
- 滚筒式采煤机调高机构液联合仿真研究.....赵丽娟, 王丽 (823)
Research of Co-simulation of Mechanical and Hydraulic System of Drum Shearer Height-regulating Mechanism.....Zhao Lijuan, Wang Li (823)
- 基于QoS和效用的云计算资源调度模型.....刘波, 刘青凤 (826)
Resource Scheduling Model in Cloud Computing Based on QoS and Utility.....Liu Bo, Liu Qingfeng (826)
- 基于冗余容错的航空总线容错接收方法研究.....周德新, 李宏, 彭妮娜, 等 (830)
Research of Fault-tolerant Receiving Method of Avionic Bus Based on Identical Reference Point.....Zhou Dexin, Li Hong, Peng Nina, et al (830)
- 基于P2P和Kademlia的云计算资源定位模型设计.....胡伟俊 (833)
Design of Resource Localization Model in Cloud Computing Environment Based on P2P and Kademlia.....Hu Weijun (833)
- 径向基函数神经网络在网络安全预测中的应用.....蓝新波, 李冬睿 (836)
Application of Radial Basis Function Neural Network in Forecast Network Security.....Lan Xinbo, Li Dongrui (836)
- 基于Modbus协议的多功能数据采集器设计.....李永强, 单鸣雷, 朱昌平, 等 (839)
Design of Modbus Protocol-Based Multifunction Data Acquisition Device.....Li Yongqiang, Shan Minglei, Zhu Changping, et al (839)
- 飞行试验机载网络数据采集与处理技术研究.....宋政斌, 覃燕, 张芹芹 (842)
Research of Airborne Network Data Acquisition and Process in Flight-test.....Song Zhengbin, Qin Yan, Zhang Qinqin (842)
- 基于综合信任度的云计算Pareto最优服务选择.....李迺 (845)
Pareto Optimal Service Selection for Cloud Computing Environment Based on Comprehensive Trust.....Li Nai (845)
- 一种具有纠错功能的射频装定系统设计.....王建军, 王飞, 姚金杰, 等 (848)
A Design of RF Setting System with Ability of Error Correction.....Wang Jianjun, Wang Fei, Yao Jinjie, et al (848)
- 基于MEMS加速度的无陀螺车辆导航技术.....陈长风, 时伟, 吴美平, 等 (851)
Gyroscope-free Vehicle Navigation Techniques Based on MEMS Accelerometer.....Chen Changfeng, Shi Wei, Wu Meiping, et al (851)
- 基于小波变换的心电采集分析系统设计与实现.....胡广平, 周华强 (854)
Design and Implementation of ECG Acquisition and Analysis System Based on Wavelet Transform.....Hu Guangping, Zhou Huaqiang (854)
- 基于AOV图和免疫优化的云计算服务组合.....褚龙现, 郑均辉 (857)
Service Composition in Cloud Computing Environment Based on AOV Figure and Immune Optimaziton.....Chu Longxian, Zheng Junhui (857)

Publisher:

Xi Quansheng

Xiao Dengwei:

Gou Yongming

Advisors of Editorial Committee:

Luan Enjie Academician

Zhang Lvqian Academician

Chen Dingchang Academician

Director of Editorial Committee:

Yu Bin

Vice Director of Editorial Committee:

Xi Quansheng, Yang Jun, Pan Anjun

Chief Editor:

Gou Yongming

Vice Chief Editor:

Meng Hancheng

English Editor:

Yang Lisheng

Competent Authority:

China Aerospace Science & Industry Corp

Sponsor:

China Association of Automated Measurement and Control Technology

Edited and Published by:

Magazine Agency of Computer Measurement & Control

Address:

4th floor, China Aerospace Mansion No. a8
Fucheng road, Haidian district, Beijing
100048, China

Tel: 010-68372068

Fax: 010-68372068

E-mail: ck@chinamca.com

Http: www.chinamca.com

General Issue:

Beijing Bureau for Distribution of Newspapers and Journals

Domestic distributor:

All Local Post Office in China

Code Name: 82-16

Publication Number:

ISSN 1671-4598

CN 11-4762/TP

Overseas Distributor:

China International Book Trading Corporation, P.O. Box 399, Beijing, 100044, China

Overseas Postal Code Name: M1480

Publishing Date: 25th Mar. 2014

Domestic Price: ¥25/Each

Overseas Price: \$10/Each



北航测试技术研究室

■ PCI/CPCI 总线系列产品

- 1553B 总线卡
- ARINC429 总线卡
- RS232/422/485 通用串口卡
- 16CH 并行 A/D 数据采集卡
- 16CH 多功能功能 A/D 卡
- 8CH 并行 D/A 卡
- 高速数字 I/O 卡
- 多路 I/O 卡
- 计数器卡
- 时统卡
- 脉冲发生器卡
- LVDS 数据 / 图像采集卡

■ 转接卡

- PCIe 转 CPCIe

■ 调理板卡

- 标准 AD/DA 调理类板
- 标准数字 I/O 调理板

■ 用户定制产品

- PCI/CPCI 专用测试卡
- 信号调理板卡

■ 测试设备及半实物仿真系统

- 专用测试设备
- 半实物仿真系统

■ 驱动程序

- Windows XP
- RTX
- VxWorks

■ 联系方式

电话: 13901027761, (010)82315915
 传真: (010)82316363
 地址: 北京航空航天大学新主 E711/E705

飞机振动及应变状态监测的无线传感器网络系统研制.....孟宏伟,马建仓,张国强,等(860)
 Development of Wireless Sensor Network System for Aircraft Vibration and Strain Condition Monitoring.....Meng Hongwei, Ma Jiancang, Zhang Guoqiang, et al(860)

基于移动4G与ZigBee无线传感网的网关设计.....王志超,刘波,花於锋(863)
 Design of Gateway Based on Mobile 4G and ZigBee Wireless Sensor Network.....Wang Zhichao, Liu Bo, Hua Yufeng(863)

基于STM32和LabVIEW的白酒电子舌的设计.....周红标,李珊,储程链,等(866)
 Electronic Tongue for Chinese Liquors Based on STM32 and LabVIEW.....Zhou Hongbiao, Li Shan, Chu Chenglian, et al(866)

动态可配置片上数据存储单元设计.....张康,王党辉,黄小平(869)
 Design of Dynamically Configurable On-chip Data Storage Unit.....Zhang Kang, Wang Danghui, Huang Xiaoping(869)

基于遗传算法有障碍物的机械手工作空间研究.....李准,李彦(872)
 Manipulator's Working Space Research on Obstacle's Effect Using Genetic Algorithm.....Li Zhun, Li Yan(872)

变压器自适应主动降噪技术研究.....杨理,蒋芸霜,周旋,等(875)
 Research on Active Noise Reduction for Transformer.....Yang Li, Jiang Yunshuang, Zhou Xuan, et al(875)

一种发动机动力系统的非线性建模方法.....黄为勇,丁洪影,赵文婧,等(879)
 A Nonlinear Modeling Method for Engine Power System.....Huang Weiyong, Ding Hongying, Zhao Wenjing, et al(879)

基于ZigBee的无线电刺激系统.....伏全海,王辅鼎,张雪冰,等(882)
 Wireless Stimulation System Based on ZigBee.....Fu Quanhai, Wang Fuding, Zhang Xuebing, et al(882)

智能化食品安全可追溯监管系统的设计与实现.....付祥,林逢升(886)
 Intelligent Regulation of Food Safety Traceability System Design and Implementation.....Fu Xiang, Lin Fengsheng(886)

基于激光干涉仪反馈的数控系统在线补偿接口开发.....林献坤,丁顺东,王益涵(889)
 Development of CNC System Online Compensation Interface Based on Laser Interferometer.....Lin Xiankun, Ding Shundong, Wang Yihan(889)

光纤通信中双口RAM的研究与应用.....马爽,吴志勇,高世杰,等(892)
 Dual-ported RAM's Research and Application in Fiber-optical Communication.....Ma Shuang, Wu Zhiyong, Gao Shijie, et al(892)

海上机动目标建模及其在分布式仿真中的应用.....孙茂义,肖冰(895)
 Modeling of Maneuvering Target on Sea and Its Application in Distributed Simulation.....Sun Maoyi, Xiao Bing(895)

基于Matlab GUI的航迹模拟系统设计.....任新涛,杨宇国(898)
 Design of Track Simulation System Based on Matlab GUI.....Ren Xintao, Yang Yanguo(898)

基于光场相机的超分辨率焦点堆栈的研究.....赵兴荣,韩燮,田卫萍(901)
 A Super-resolution Focal Stack Technology Based on Light Field Camera.....Zhao Xingrong, Han Xie, Tian Weiping(901)

基于GSM多通道远程遥控开关的设计.....卢超(905)
 Design of Multi Channel Remote Control Switch Based on GSM Network.....Lu Chao(905)

分布式计算机系统大容量存储器模块的设计与实现.....杨涛,李成文,杨军祥,等(909)
 Design and Application of the Mass Memory Module for Distributed Computer System.....Yang Tao, Li Chengwen, Yang Junxiang, et al(909)

基于ABC-BP神经网络的用电量预测研究.....徐晨,曹莉,梁小晓,等(912)
 Research on Electricity Demand Forecasting Based on ABC-BP Neural Network.....Xu Chen, Cao Li, Liang Xiaoxiao, et al(912)

开关电路中的潜在问题进化Petri网分析方法.....刘丙杰,冀海燕(915)
 Evolutionary Petri nets for Sneak Circuit Analysis of Switch Circuits.....Liu Bingjie, Ji Haiyan(915)

USB-1149.1边界扫描控制器的设计与实现.....耿建平,陈林艳,尚玉玲(919)
 Design and Implementation of USB-1149.1 Boundary Scan Controller.....Geng Jianping, Chen Linyan, Shang Yuling(919)

并联式标准表法气体流量检定装置的设计.....刘丁发,徐志鹏,王凯于,等(923)
 Design of Gas Flow Verification Device with Parallel Master Meters.....Liu Dingfa, Xu Zhipeng, Wang Kaiyu, et al(923)

分布式监测系统缓变信号无损压缩方法研究.....王怀光,张培林,吴定海,等(926)
 Lossless Compression Method Research of Slowly Varying Signals for Distributed Monitoring System.....Wang Huaiguang, Zhang Peilin, Wu Dinghai, et al(926)

基于TSA的直升机传动系统振动信号处理.....付海燕,吉小军,李兴旺(930)
 TSA-based Helicopter Transmission System Vibration Signal Processing.....Fu Haiyan, Ji Xiaojun, Li Xingwang(930)

基于MSP430和GSM的独立光伏系统设计与实现.....赵方,郑小梅,卢清波,等(932)
 Design and Realization of a Stand-alone Photovoltaic System Based on MSP430 and GSM.....Zhao Fang, Zheng Xiaomei, Lu Qingbo, et al(932)

运用无线数据传输模块的风机机组能效测量装置的研制.....郭乃理,杨春生,肖鹏,等(935)
 Development of Measuring Device for Energy Efficiency of Fan Unit with Wireless Transmission of Real-time Data.....Guo Naili, Yang Chunsheng, Xiao Peng, et al(935)

基于IEEE802.15.4的煤矿井下无线语音通信系统设计与实现.....王大虎,张且且,孙一帆,等(938)
 Design and Implementation of Wireless Voice Communication System in Coal Mine Based on IEEE802.15.4.....Wang Dahu, Zhang Qieqie, Sun Yifan, et al(938)

基于TRIZ的烘干抽湿一体机的研发.....滕秀才,张海燕,吴永明(941)
 Research and Development of Drying Suction Wet Multifunction System Based on TRIZ.....Teng Xiucui, Zhang Haiyan, Wu Yongming(941)

一种机载航电系统光背板的设计与应用.....湛文韬,孙靖国,解文涛,等(945)
 A Design and Appliance of Optic Backplane Applied in Airborne Avionics System.....Zhan Wentao, Sun Jingguo, Xie Wentao, et al(945)

基于TMS320F28035的微型光伏逆变切换系统.....易金桥,谭小元,艾青,等(948)
 Miniature Photovoltaic Inverter Switching System Based on TMS320F28035.....Yi Jinqiao, Tan Xiaoyuan, Ai Qing, et al(948)

基于压电能量收集技术的无线传感器节点设计.....陈绍炜,王子魏,韦 Gang(952)
 Design of Wireless Sensor Node Based on Piezoelectric Energy Harvesting Technology.....Chen Shaowei, Wang Ziwei, Wei Gang(952)

一种用于发动机仿真平台的线性可变差动变压器模拟器的设计.....刘涛,张大鹏(956)
 Design of Linear Variable Differential Transformer Simulator for Engine Simulation Platform.....Liu Tao, Zhang Dapeng(956)

· 软件工程技术 · Software Engineering Technology

基于LabVIEW和Matlab混合编程的时反超声导波激励和采集系统设计.....王建斌,杜云朋,刘兵,等(959)
 Design of Time Reversal Guided Wave Excitation and Acquisition System Based on LabVIEW and Matlab Mixed Programming.....Wang Jianbin, Du Yunpeng, Liu Bing, et al(959)

基于排队论的组件式系统的性能测试方法研究.....刘健,刘明(962)
 An Approach for Component-based Software Systems Early Performance Assessment Based on Queuing Theory.....Liu Jian, Liu Ming(962)

· 智能仪表与传感器技术 · Technology of Intelligent Meters and Sensors

克隆选择的无线传感器网络拓扑优化方法.....谢晶鑫,张和生,孙伟,等(966)
 A Topology Control Optimization Approach of Wireless Sensor Network Based on Clonal Selection.....Xie Jingxin, Zhang Hesheng, Sun Wei, et al(966)

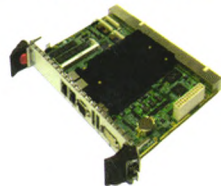
温度补偿型双通道甲烷测试仪的设计.....张晋疆,秦丽,林斯佳,等(969)
 Design of Two-channel Methane Instrument with Temperature Compensation.....Zhang Jinjiang, Qin Li, Lin Sijia, et al(969)

北京神州飞航科技有限责任公司是专业从事嵌入式计算机及相关软硬件产品研发、制造、销售和服务等一体化经营的高科技企业。从成立之日起，神州飞航致力于采用先进可靠电子、计算机软硬件技术，为工程师提供测试、仿真及各种嵌入式应用和服务。经过多年的产品研发积累，神州飞航在专用计算机、通讯接口、数据采集、视频处理、高速大容量存储等领域形成了丰富的产品线，并为航空、航天、航海、兵器、核工业、电子、部队、科研院所等行业客户提供了多种应用解决方案。

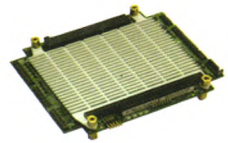
计算机类产品



CPCI控制器,3U

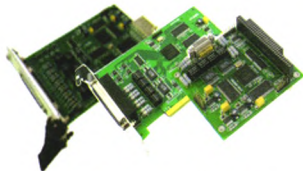


CPCI控制器,6U

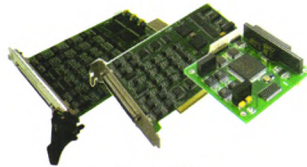


PC104/PC104+计算机

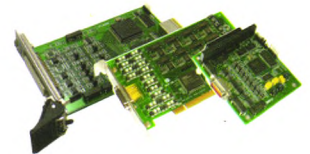
通讯接口类产品



1553通讯接口



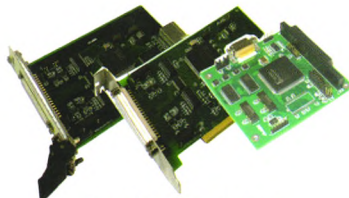
ARINC429



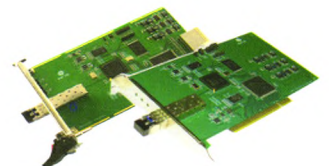
串口通讯接口



AFDX



CAN通讯接口

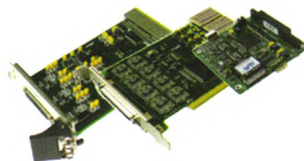


反射内存卡

数据采集类产品



AD产品



DA产品



数字DIO产品

欢迎订购

欲了解更多详情，请访问神州飞航公司网站或致电销售部

www.senfotech.com

北京神州飞航科技有限责任公司
BEIJING SENFETECH CORPORATION

地址：北京市海淀区西三环北路21号北控久凌大厦北楼10层
邮编：100089 电话：400-099-8818 010-68403305/6/7/8 传真：010-68403309

西安办事处

电话：029-88339041/42
传真：029-88331458

上海办事处

电话：021-64956968
传真：021-54234279

武汉办事处

电话：027-87415992
传真：027-87415997

成都办事处

电话：028-87715721/22
传真：028-87794499

ISSN 1671-4598



9 771671 459145

万方数据



绿色印刷产品

主管单位：中国航天科工集团公司
编辑出版：《计算机测量与控制》杂志社
原刊名：《计算机自动测量与控制》

刊号：ISSN 1671-4598
CN 11-4762/TP
邮发代号：82-16
定价：25.00元