

[1]张娇婷,张颖龙,朱 怡,等.基于ARM+FPGA的通用导弹弹载记录仪的设计[J].弹箭与制导学报,2014,2:38-41.

ZHANG Jiaoting,ZHANG Yinglong,ZHU Yi,et al.The Design of Universal Missile-borne Data Recorder Based on the Structure of ARM+FPGA[J].,2014,2:38-41.



基于ARM+FPGA的通用导弹弹载记录仪的设计 (PDF)

《弹箭与制导学报》[ISSN:1673-9728/CN:61-1234/TJ] 期数: 2014年第2期 页码: 38-41 栏目: 导弹与制导技术 出版日期: 2014-05-12

Title: The Design of Universal Missile-borne Data Recorder Based on the Structure of ARM+FPGA

作者: 张娇婷; 张颖龙; 朱 怡; 刘 伟; 黑 蕾; 裴养卫
中国兵器工业第203研究所,西安 710065

Author(s): ZHANG Jiaoting; ZHANG Yinglong; ZHU Yi; LIU Wei; HEI Lei; PEI Yangwei
No.203 Research Institute of China Ordnance Industries, Xi'an 710065, China

关键词: 弹载记录仪; ARM; FPGA; 采集与传输; 数据存储

Keywords: missile borne recorder; ARM; FPGA; data acquisition and transmission; data storage

分类号: TJ760.321

DOI: -

文献标识码: A

摘要: 针对目前种类越来越多的武器系统科研背景,开发出一种通用型的导弹弹载记录仪以满足不同项目背景的测试要求变得十分必要,文中提出了一种基于结构的通用导弹弹载记录仪设计方案,以实现对各种不同电器接口信号的测试。详细介绍了这种方案的硬件结构设计和软件设计。此种设计方案合理可行,满足了通用导弹弹载记录仪实时性、大容量、多接口的设计要求。

Abstract: In light of more and more types of weapon system research background at present, it becomes very necessary to develop a generic type of missile borne recorder in order to satisfy the different background of the project testing requirements. In this paper, a design scheme of general missile borne recorder was presented based on the structure of ARM+FPGA in order to realize various electrical interface signal test. Also, in this paper, the hardware design and software design of the scheme were introduced. This design is reasonable and feasible, satisfies the general missile borne recorder's design requirements of real-time, large capacity and multi interface.

参考文献/REFERENCES

- [1] 周立功.ARM微控制器基础与实战 [M].2版.北京:北京航空航天大学出版社,2005.
- [2] 斯洛斯.ARM嵌入式系统开发:软件设计与优化[M].北京:北京航空航天大学出版社,2005.
- [3] 沈兰莉.数据采集技术[M].合肥:中国科学技术大学出版社,1990.
- [4] 杜春雷.ARM体系结构与编程[M].北京:清华大学出版社,2003.
- [5] 周润景,图雅,张丽敏.基于Quartus II的FPGA/CPLD数字系统设计实例[M].北京:电子工业出版社,2008.

导航/NAVIGATE	
本期目录/Table of Contents	
下一篇/Next Article	
上一篇/Previous Article	
工具/TOOLS	
引用本文的文章/References	
下载 PDF/Download PDF(711KB)	
立即打印本文/Print Now	
统计/STATISTICS	
摘要浏览/Viewed	
全文下载/Downloads	21
评论/Comments	7

[6] 吴元亮,陈小平.基于ARM微控制器LPC2119的CAN总线节点设计[J].微电子学与计算机,2009,26(6):183-188.

备注/Memo: 收稿日期:2013-06-22

作者简介:张娇婷(1972-),女,陕西礼泉人,高级工程师,硕士,研究方向:导弹制导与测试。
