

基于嵌入式的多通道联合通信控制器设计

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摘要: 提出一种基于嵌入式技术的多通道联合通信控制器设计方法.采用频域与时域联合均衡调制方法进行多通道联合通信的畸变波形校正, 实现多通道联合通信控制律优化设计.在DSP 集成信息处理环境中进行控制器的硬件模块化设计和集成开发.测试结果表明, 采用该方法进行多通道联合通信控制的输出均衡性较好, 通信输出的抗干扰能力较强, 降低输出误码率, 提高通信控制性能.

关键词: 嵌入式; 多通道联合通信; 控制器; ARM; 均衡; 调制

中图分类号: TN911

文献标识码: A

文章编号: 1000-7180(2018)08-0137-04

Design of Multi-Channel Joint Communication Controller Based on Embedded System

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Abstract: A design method of multi-channel joint communication controller based on embedded technology is proposed. The distortion waveform correction of multi-channel joint communication is carried out by using frequency domain and time domain joint equalization modulation method. The optimal design of multi-channel joint communication control law is realized, and the hardware modularization design and integrated development of controller in DSP integrated information processing environment are carried out. The test results show that the proposed method has good output equalization and strong anti-interference ability. It can reduce the bit error rate and improve the communication control performance.

Key words: embedded; multichannel joint communication; controller ARM; equalization; modulation

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