基于PCI总线的数据采集与回放处理系统

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摘要:机车信号对机车安全运行非常重要。对机车信号进行可靠的无缝采集和回放分析,是信号检测设备设计的基础。介绍一种基于PCI总线的机车信号数据采集、回放与处理系统。详细介绍系统的硬件结构和PCI数据采集卡及其控制程序的设计。系统能够进行12位精度的双通道信号的同步采集,可在界面上同时监视两个通道所采的数据,进行波形回放,能对机车信号进行实时处理,并实时显示波形与处理结果,能用于长时间连续数据采集与存储。

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Data acquisition and replay processing system based on PCI bus

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Abstract: Cab-signal is very important to the train travel. The reliable and seamless Cab signal acquisition and replay analysis are the bases of the design of Cab-signal detecting and processing systems. A system of the data acquisition, replay and process based on PCI local bus is introduced in this paper. 12-bit data could be synchronous sampled in double channels. Sampled signals or replay signal waves of the two channels can be showing on the screen at same time, when Cab-signals were replaying, the results of the signal processing could be showed in the same time. The device can used for long time data acquisition and storage.

Key words:

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