

论文

一种基于CF卡的声画同步广告灯箱设计

田岚,侯正信,刘庆敏

天津大学电子信息工程学院, 天津 300072; 山东大学信息科学与工程学院, 济南 250100

摘要:

为低成本实现与广告灯箱同步发声功能,设计了一种基于C8051F020和CF卡的有声灯箱控制器.本文在给出系统设计方案基础上,着重介绍几个关键问题:给出C8051F020和CF卡的接口电路;解决不同容量CF卡格式化为FAT文件系统时隐藏扇区的问题;以快速读取CF卡数据、双缓冲、有限状态机等组合技术解决了声音播放不连续的问题.该系统运行可靠,其设计合理、实用.

关键词: CF卡;声画同步;C8051F020;有限状态机

A sound-image synchronization sign controller based on a CF card

TIAN Lan, HOU Zheng-Shen, LIU Qiang-Min

School of Electronic and Information Engineering, Tianjin University, Tianjin 300072, China; School of Information Science and Engineering, Shandong University, Jinan 250100, China

Abstract:

A sign controller was designed and implemented based on a C8051F020 and CF card, which had a sound image synchronization function for scrolling signs at low cost. The system design scheme and several relative key points were introduced. The hardware interface circuit between the C8051F020 and CF card was given, and the hidden sector problems of FAT file system caused by formatting different capacity CF cards was solved. By the combination of the fast reading CF card data, dual buffer and FSM (Finite State Machine), continuous sound playing is steady realized. The running results showed that the system design is reliable and practical.

Keywords: CF card; sound image synchronization; C8051F020; FSM

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