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论文

高分辨率航拍图像实时记录方法

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摘要:

针对某型高分辨率航空摄像机输出数据流达到每秒200兆字节,常规方法难于实现图像数据实时记录的问题,提出一种自启动多通道混合同步直写SCSI硬盘的方法.通过新设计的状态控制器,优化了SCSI硬盘的记录时序,使多个并行记录通道能根据数据缓存器和硬盘的状态自动产生独立的直写脉冲,以混合同步的方式将数据高速记录到硬盘上.实验结果表明:该方法可使图像数据持续记录速率达到每秒200兆字节,储存容量可达280吉字节,且结构简单、实用.

关键词: 高分辨率图像 实时记录 混合同步

Real Time Record Method for High Resolution Aerial Image

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Abstract:

In order to solve the problem that when the output data stream of a certain type of high resolution

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aerial camera reaches 200 megabytes per second,conventional methods are difficult to record the image data in real time,a self-starting,multi-channel hybrid synchronization direct-write method of SCSI hard disk is proposed.The new designed state controller optimizes the recording time series of the SCSI hard disk,so that multiple concurrent recording channels can generate separate direct-write pulses automatically according to the data cache and the status of the hard disk.The image data can be recorded on the hard disk with high speed and hybrid synchronization.Experimental results prove that the method can record the image data at the rate of 200 megabytes per second,storage capacity attained 280 Gigabytes,and moreover,the structure is simple and practical.

Keywords: High resolution image Real time record Hybrid synchronization

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