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基于DSP的SDTV/HDTV数字电视信号格式转换卡设计

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摘要 设计了基于DSP的SDTV/HDTV电视信号格式转换卡。运用双线性插值的方法, 在DSP上实现对图像实时的放大处理, 算法已在ADSP-TS201S开发板上得到验证, 效果良好。设计难点在于, 数字电视信号的时钟频率很高, 要处理的信号量极大, 因此采用多DSP并行处理。

关键词 [标清转高清](#) [DSP](#) [双线性插值](#)

分类号

Format conversion board design of Standard Digital Television (SDTV) to High Definition Television (HDTV) based on DSP

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Abstract

The circuit board design of SDTV/HDTV format conversion is proposed. Using the method of bilinear interpolation, which has been testified well on ADSP-TS201S EZ-KIT LITE evaluation board, the realization of real-time image enlargement processing based on DSP is accessible. The difficulty of the design is that the clock signal frequency of digital TV is so high that a large amount of information needs to be dealt with in a short period of time, so the method of multi-DSPs parallel processing is employed.

Key words [SDTV/HDTV](#) [DSP](#) [bilinear interpolation](#)

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