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高速矢量处理机的设计与实现

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DESIGN AND ACCOMPLISHMENT IN A HIGH SPEED VECTOR PROCESSOR

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摘要 为了满足海量实时处理需求,利用 Butterfly DSP公司的 BDSP91 2 4 /932 0矢量数字信号处理 (DigitalSignal Processing,DSP)芯片组,设计和实现了一种高速矢量处理机,并给出了该矢量处理机的设计思想和性能指标。最后说明该处理机在合成孔径雷达 (Synthetic Aperture Radar,SAR)脉冲压缩和其它领域的应用。

关键词： 实时 矢量处理 DSP FFT SAR

Abstract： This paper studied and accomplished a high speed vector processor. The main component of the processor is a special Digital Signal Processing (DSP) chip set BDSP9124/9320, which is produced by Butterfly DSP Inc. The processor could be applied to Synthetic Aperture Radar (SAR) and other fields which require real-time calculating FFT, correlation, convolution, and other vector processing.

Keywords： real-t ime v ector pro cessing DSP FFT SAR

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