基于DSP及FPDA的旋转调制式陀螺寻北仪的研制

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摘　要：

设计了基于DSP处理器和FPGA为核心的数据采集与处理系统，FPGA完成数据的采集、存储及逻辑控制，DSP完成寻北解算。实际应用效果表明，该系统具有数据采集实时性、可靠性高，寻北解算速度快、精度高等优点，采用该系统研制的寻北仪在4min 内寻北精度达到30″。

关键词：寻北仪；数据采集；旋转调制；DSP；FPGA

Real time data acquisition and processing of the Revolution-Modulation North-Finder

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Abstract:

This paper designs a special system of data acquisition and processing based on FPGA&DSP .The north-seeking algorithm is separately executed in the core of DSP chip ,and FPGA perform real time data acquisition,buffering and processing.Experiments and application show that the system works in real time and steadily with anticipating precision.The precision of north seeker attains 30″ in 4 minutes.

Keywords: North Finder r；Data acquisition；Rotation-Modulation；DSP；FPGA

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