

Embedded Vehicle Positioning System Design

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Abstract

This research was to make an embedded vehicle positioning system, which was obtained by using an embedded Digital-Signal-Processor TMS320C6711 and Kalman Filter technology to integrate Inertia Navigation System, Global Positioning System, and Geographic Information System. For practical consideration, the lost tracking conditions of GPS were performed, the results showed that the longer the GPS locked, the better the error parameters of INS were calibrated, thus the integrated system can preserve the advantages and avoid the disadvantages of both systems.

Keyword : GPS, INS, DSP, Kalman Filter, Vehicle Positioning System.