Abstract

Increasing use of Electronic gadget in vehicular system need researchers’ attention to provide optimize solution for the system; in various aspects like power consumption, size, cost, complexity etc. There are many economic and technical arguments for the reduction of the number of Electronic Control Units (ECUs). One can be number of nearby applications of
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homogeneous or heterogeneous nature can be controlled by one ECU. The use of multi-core technology gives facility to put multiple cores depends on the applications in to single die with their peripherals. The paper presents design of multi-core embedded controller for vehicular system. Two Leon processor cores connected with AMBA shared bus with memory and peripherals. Some vehicular applications are modeled on the designed system. The modeling of dual core embedded system and application are presented in the paper with their simulation results.

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