The Design of Vehicle Surveillance System with Intelligent Image Sensor

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ABSTRACT

The owners could at most passively look at footage from surveillance camera recordings and look for the culprit when vehicles were broken into and stolen or when parked vehicles in parking lots or along roads were damaged due to incautious hit. Therefore, a vehicle security system that has the capability to actively alert owners is indeed needed. This study proposed a design for an intelligent vehicle security system featuring an intelligent image sensor in this research, and it has incorporated a global positioning satellite system (GPS) in an embedded system. The system works by utilizing a smart image sensor that has the capability to eliminate the effect of the brightness and raise the identification rate, which effectively help the system to determine if someone is trying to break into the vehicle. In addition, a crash sensor has been built into the system to determine if the vehicle has been hit by another vehicle. The proposed surveillance system will automatically notify its owner through short message service (SMS) and track the vehicle ’ s current location using the GPS system when the vehicle has been broken into or hit. The system will then transmit relevant information through GPRS to the remote database designed to provide the users to inspect various information regarding the car at any time through the Internet to accomplish the task of ensuring security for the vehicle.

Keywords : Embedded System、Intelligent Image Sensor、Image Identification

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