

## Simulation of Communication and Sensing Device in Automobiles Using VHDL

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**Abstract :** The exclusive objective of this paper is to develop a device which can pass on the interpreted result of the sensed information to the interfaced communicable devices to avoid or minimise accidents. This device may also be used in case of emergencies like kidnapping, robberies, medical emergencies etc. The present era has seen a rapid metamorphosis in the automobile industry with increasing use of technology and speed. The increase in purchasing power of customers and price war of automobile companies has made an easy access to the automobile users. The use of automobiles has increased tremendously in last 4-5 years thus causing traffic congestions and thus making vehicles more prone to accidents. This device can be an effective measure to counteract cases of abduction. Risks of accidents can be decreased tremendously through the notifications received by these alerts. It will help to detect the upcoming emergencies. This paper includes the simulation of the communication and sensing device required in automobiles using VHDL.

**Keywords :** automobiles, communication, component, cyclic redundancy check (CRC), modulo-2 arithmetic, parity bits, receiver, sensors, transmitter, turns, VHDL (VHSIC hardware descriptive language)

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