

Pre-crash Safety System

TECHNOLOGY

Radar detects obstacles across a broad area, ties into collision-warning and damage-mitigation systems

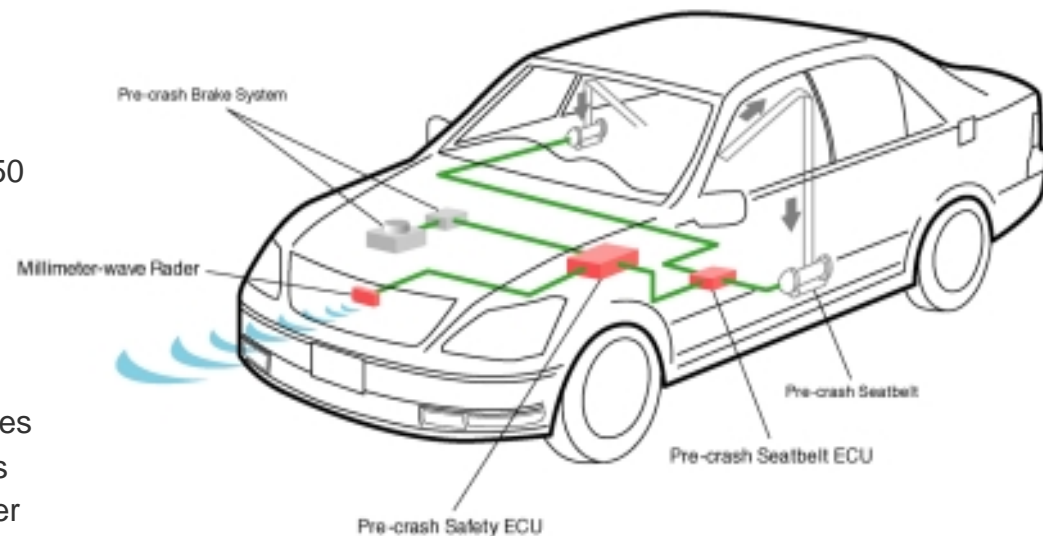
TECHNOLOGY: Pre-crash sensing system

The pre-crash sensing system uses radar to minimize injury and damage in the event of a collision. It is the world's first collision-warning and injury-reduction system.

Operating at 77 GHz, the millimeter-wave radar and ECU combination is effective at relative velocities up to 200 km/h, over distances up to 150 meters. DENSO's unit also covers a 20° arc, wider than that of competing systems, giving it a greater range for detecting potential obstacles.

Millimeter-wave radar determines an object's position, distance, and speed; this information goes into a pre-crash safety computer which also takes into account relative velocities, distance, and other factors to determine whether or not a collision can be avoided. If not, it notifies the seatbelt control computer, which tightens up any slack in the seatbelts to maximize the initial restraint on the driver and passengers at the moment of the crash.

The pre-crash safety system



DENSO