

Denso have devised a new standard vision sensor to detect pedestrians at night, cyclists, road signs, driving lanes and other road users.



Working in conjunction with a millimetre-wave radar sensor, the camera allows automobiles to automatically activate emergency braking when obstacles are identified. It is featured in the 2018 Toyota Alphard and Vellfire, which were released in January this year in the Japanese domestic market.

The sensor improves night vision by using a unique lens specifically designed for low-light use, and a solid-state imaging device with high sensitivity. These innovations help the sensor better identify other road users and different-shaped road signs, such as triangular, rectangular, and octagonal signs used in Japan, Europe, and America. An improved white-line detection algorithm and road-edge detection algorithm also broaden the operating range of lane-keeping assistance and lane departure alert functions, while lower cost and a 40% size reduction from previous models makes installation easier and more readily feasible.