

Nidec Develops the World's Smallest ADAS Sensor Fusion Unit Integrating a Monocular Camera and a Millimeter Wave Radar

Today, Nidec announced that it has developed a new sensor fusion unit—the world's smallest sensor of its kind—integrating a monocular camera and a millimeter wave radar. The new sensor can be placed on the windshield behind the mirror just like a monocular camera. With this product, it is possible to solve the problems associated with front grille installation of millimeter wave radars: sensitivity drop due to dirt adhesion, axis misalignment at the time of light collision and influence on the front design.

Moreover, by adopting our newly developed new type of antenna, the millimeter wave radar achieves a detection distance of 200 m or more while the detection accuracy is 90 degrees wide, even though it is installed behind the windshield in the passenger compartment. By realizing a detection distance equivalent to that of front-grille-installed devices, it can be used as an ACC (Autonomous Cruise Control) sensor that allows the vehicle to maintain a constant distance to the preceding vehicle.

Furthermore, by integrating the camera and millimeter wave radar, advanced sensor fusion becomes possible, resulting in optimal control at an earlier timing, in comparison with the conventional separate type sensor fusion, in various conditions and road environments under AEB (Autonomous Emergency Braking) operation.

Nidec aims to expand the use of safety equipment to contribute to a transportation society where all people around the world can enjoy the safety of inexpensive and highly functional sensors that integrate cameras and millimeter wave radars.

Nidec will continue to strive towards the realization of a society free of traffic accidents by further utilizing the safety technology that we have cultivated.



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