HONDA

News Release

November 17, 2023

Honda to Introduce “Honda SENSING 360+” Omnidirectional Safety and Driver-assistive System
- Featuring new functions to further reduce driver burden, made possible by adding new technologies to further enhance 360-degree sensing of Honda SENSING 360

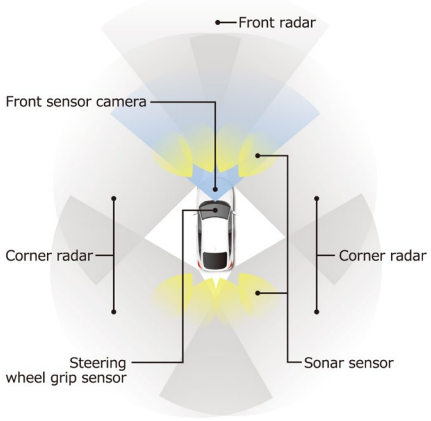
Honda SENSING 360+

TOKYO, Japan, November 17, 2023 – Honda Motor Co., Ltd. today announced the introduction of the new **Honda SENSING 360+**[*1] omnidirectional safety and driver-assistive system which removes blind spots around the vehicle and contributes to collision avoidance and the reduction of driver burden while driving.

Starting with the Honda CR-V that went on sale in China in 2022, Honda began offering the current Honda SENSING 360 omnidirectional safety and driver-assistive system. This system removed blind spots around the vehicle by realizing 360-degree sensing[*2] with a total of five units of millimeter-wave radar in front and at each corner of the vehicle, contributing to the avoidance of collisions with other vehicles and pedestrians and reducing the burden on the driver.

In addition to the functions of the current Honda SENSING 360, Honda SENSING 360+ will newly adopt a driver monitoring camera and high-definition maps to improve functions to monitor the driver’s condition and to control the vehicle, respectively, to further reduce driver burden. By reducing health-related or human error-triggered collisions with such new technologies, Honda will strive to offer vehicles which enable everyone to enjoy the freedom of mobility with complete peace of mind and encourage people to want to go out more actively and go farther in their vehicles.

Honda is planning to begin applying the new Honda SENSING 360+ to Accord which will go on sale in China in 2024 before expanding the application on a global basis.



Honda SENSING 360+
High-definition maps、Driver monitoring camera

*1 Honda SENSING, Honda SENSING 360 and Honda SENSING 360+ offer driver-assistive functions, and there is a limit to the capabilities (e.g. recognition capability and control capability) of individual functions. Please do not overestimate the capabilities of each function and drive safely while maintaining a good driving posture, paying constant attention to your surroundings and being ready to take control of steering and braking operations at any time.

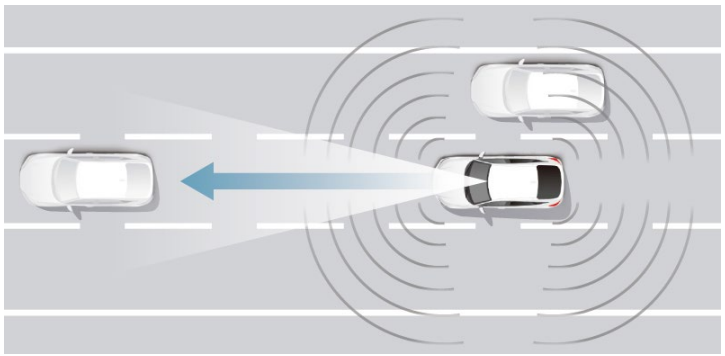
*2 There is a limit to the detection performance of Honda SENSING 360. The 360-degree sensing does not eliminate the need for visual confirmation by the driver.

【Key features of Honda SENSING 360+】

■Advanced In Lane Driving with Hands-off Capability*3

Whie driving on an expressway, the system reduces driver burden by operating the accelerator, brake pedal and steering wheel to assist the driver to maintain proper vehicle speed and stay in the lane even while the driver takes hands off the steering wheel.

The system utilizes high-definition maps and the global navigation satellite system (GNSS*4) to identify the vehicle position. When there is no car in front of the vehicle, the system drives the vehicle along the middle of the lane while maintaining the pre-set vehicle speed. When there is a car in front, the system follows that vehicle in front while maintaining a proper following distance. For turning, the system detects the curvature of the lane in advance and performs deceleration and acceleration in accordance with the detected curvature to assist the driver in the way that they can drive with a peace of mind.



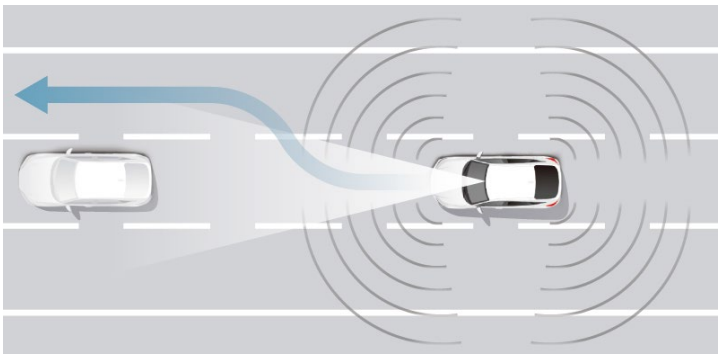
*3 There are differences in available functions depending on the country and region.

*4 GNSS stands for Global Navigation Satellite System, a collective name for satellite positioning, navigation and timing (PNT) systems.

■ Active Lane Change Recommendation[*3]

Whie driving on an expressway using Advanced In Lane Driving with Hands-off Capability, when the system detects a vehicle in front which is moving at a slower speed, the system assesses the vehicle's surroundings under certain conditions. When the system determines a lane change is possible, it notifies the driver. When the driver approves the lane change to pass the slower vehicle by pressing the switch button on the steering wheel, the system controls the turn signal, accelerating/decelerating and steering to assist in passing and returning to the original lane.

Moreover, on the navigation mode, the system recommends a lane change necessary to drive toward the destination based on the route guidance being provided by the navigation system. Once the driver gives approval, the system automatically operates the vehicle for the entire process of the lane change – to entering a proper lane at a junction or an exit lane and leave the expressway.



■ Predictive Curve Departure Warning

Upon approaching a curve or while navigating a curve on an expressway, when the system determines that immediate deceleration is necessary to avoid the risk of a roadway departure, the system provides warnings and assists in deceleration to reduce the possibility of an incident in which the vehicle leaves the roadway at a curve.

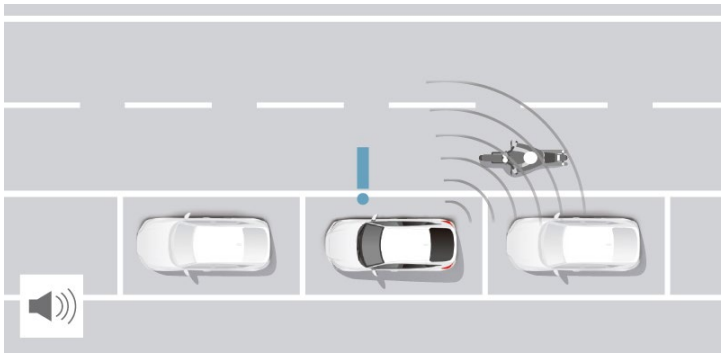
When the vehicle is about to enter a curve at a high speed, the system provides a visual warning by displaying "Caution curve ahead" on the meter to facilitate the driver's early recognition of the risk.

When the vehicle approaches the curve and reaches the point where the driver must take action to decelerate, the system provides audible warnings and flashes visual warnings on the Head-Up Display to alert the driver to decelerate.

When the vehicle further approaches the curve and immediate deceleration is required, the system provides stronger warnings and decelerates the vehicle to reduce the possibility of a road departure at the curve.

■ Exit Warning

While the vehicle is parked, when the system detects a vehicle approaching from the rear, the indicator on the front pillar or side mirror lights up to assist occupants to recognize an approaching vehicle. When the system detects the risk of a collision between the vehicle door the occupant is about to open/opened and other vehicles passing by, an indicator flashes and an audible alarm sounds to alert the occupants.

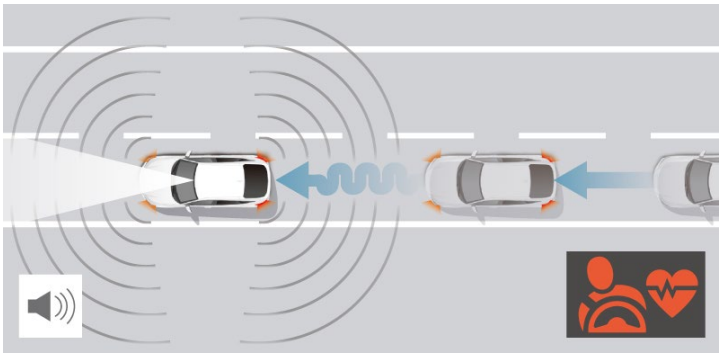


■ Driver Emergency Support System[*3]

When the driver becomes incapable of continuing to drive due to some factors such as a sudden change in health condition while driving, the system assists deceleration and stopping of the vehicle within the same lane.

When the driver is unresponsive to the system's requests for a handover (the transfer of control back to the driver), the system escalates alarm sounds and urges the driver to respond. If the driver remains unresponsive, the system will assist deceleration and stopping of the vehicle within the same lane while alerting other road users around the vehicle using hazard lights and the horn.

Moreover, the system connects to the emergency call center service HELPNET®[*5] in order to secure the safety of the driver, occupants and other road users.



*5 For the use of the HELPNET® emergency call center service, the users have to download a dedicated app.

【Honda initiatives in the areas of safety and driver-assistive technologies】

Based on the global safety slogan, “Safety for Everyone,” Honda has been striving for a collision-free society for everyone sharing the road by pursuing the research and development of safety technologies from the perspective of both hardware and software. Honda is now aiming for a high goal to realize “zero traffic collision fatalities involving Honda motorcycles and automobiles globally by 2050.” Since its introduction in 2014, the Honda SENSING functions have continued to advance, expanding application to mass-production models globally and supporting Honda customers in a variety of driving situations.

Moreover, Honda has been continuously advancing its safety and driver-assistive technologies to further enhance the safety and peace of mind of its customers and everyone sharing the road. In 2021, Honda began sales of the Honda Legend EX equipped with Honda SENSING Elite, including the Traffic Jam Pilot function, which qualifies for Level 3 automated driving technology. In 2022, Honda began offering the Honda SENSING 360 omnidirectional safety and driver-assistive system, which was developed while leveraging know-how amassed through the development of Honda SENSING Elite technology.

By leveraging strengths unique to a company that conducts research and development of safety technologies for both motorcycle and automobile business, Honda will continue working sincerely to lead efforts toward the realization of a collision-free society.