

Video: Visteon's Highway Pilot demonstrated in Germany

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Based on a unique central computing approach designed to accelerate the adoption of self-driving technology, Visteon's Chief Technology Office has taken its DriveCore™ autonomous driving system on the German highway near its Karlsruhe technology center to demonstrate the platform's latest autonomous feature - Highway Pilot.

DriveCore™ is modular and flexible, based on a centralized domain controller, incorporating artificial intelligence for object detection and tracking, sensor fusion, situation analysis and behavior planning. Incorporating unique middleware, Visteon's platform allows easy assimilation of software components from automakers, suppliers and third parties.

As its name implies, the Highway Pilot feature is designed to relieve the driver of the highway driving task. It keeps speed limits, a safe distance to adjacent traffic, steers and offers lane changes when appropriate.

If Visteon's Highway Pilot cannot handle a specific situation, it will request the driver to take back control with appropriate notice. If the driver doesn't react, the Highway Pilot will bring the vehicle to a safe stop in the ego lane and turn on the hazard lights.

In autonomous mode, Highway Pilot covers the full speed range, from 0-120kph (0-70mph) – maintaining safe parameters in relation to other vehicles at all times. The intuitive system recognizes road signs – such as speed limit warnings – and adapts the vehicle's speed to comply accordingly.

Visteon's Highway Pilot also uses up-to-date lane and map information to ensure the most accurate on-road positioning as possible – illustrating DriveCore™'s capabilities in terms of the development of driver assistance systems for autonomous driving, ranging from Levels 2-5.