

Cadillac to make Super Cruise hands-free driving tech available in 2018 Cadillac CT6

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Credit: General Motors

(Tech Xplore)—Did you really think General Motors would sit back and let Tesla hog the driving system spotlight for long? We didn't think so. Super Cruise is coming out in the 2018 Cadillac CT6 later this year. Andrew Hawkins, transportation reporter at *The Verge*, pointed out that this will be the first car from [GM](#) to include Super Cruise.

The technology will be available in the 2018 Cadillac CT6 in U.S. and Canadian markets. This is a prestige sedan model. "Super Cruise utilizes two advanced technology systems—a driver attention system and precision LiDAR map data—to ensure safe and confident vehicle operation. These systems are added to the network of cameras and radar sensors in the CT6, providing a more data-rich approach to driver assistance that is unique in the industry," said the press release.

Super Cruise is a system enabling hands-free highway driving. You can expect automatic control of speed, automatic steering, automatic lane centering. The two key features being promoted are a driver attention system and precision LiDAR map data

Ryan Felton, transportation and technology reporter, *Jalopnik*, commented: "Cadillac is taking direct aim at Tesla by announcing that the 2018 CT6 sedan will be General Motors first vehicle to come equipped with the long-awaited Super Cruise, the semi-autonomous highway driving feature."

Felton said GM has been working on this for years.

"Super Cruise bears similarities to Autopilot. As long as someone's at the wheel, the feature can take [control](#) of driving on the highway, keep the vehicle within a lane, and change speed based on traffic. And the driver has to be at the wheel; the system's designed to use facial recognition software that can determine whether a driver's asleep or not paying full attention."

The LiDAR-scanned map database which Cadillac has added into the Super Cruise mix is, however, a distinguishing feature. That LIDAR add was clarified further by Hawkins in *The Verge*: "The vehicle itself is not equipped with the laser sensor, but with a database created using a fleet of LIDAR-equipped vehicles, which Cadillac claims have mapped

"every limited-access highway in the US and Canada."

Cadillac made special mention of the precision LADAR map in its press release and said it was developed specifically for Super Cruise.

"Engineers mapped every mile of limited-access highway in the U.S. and Canada, providing detailed information to the car about the road ahead."

What does driver attention mean? An alarm if the driver falls asleep? The technology sounds more sophisticated than that. It involves a system using a small camera located on the top of the steering column that focuses exclusively on the driver and works with infrared lights to track head position to determine where the driver is looking whenever Super Cruise is in operation, said the press release.

(If the driver's attention wanders, Super Cruise uses an escalating series of alerts to ensure the driver keeps eyes on the road, said Hawkins.)

"Existing driver assist systems only rely upon steering wheel input and warning messages to request driver attention and control. Cadillac is the only manufacturer to monitor driver attention to the [road](#) ahead when Super Cruise is engaged."

"If the system detects the driver has turned attention away from the road ahead for too long, it will prompt the driver to return their attention to the road ahead. If the driver does not immediately refocus on the road, Super Cruise will continue to safely steer until a further escalation of alerts prompts the driver to resume supervision.

If the system determines continued inattentiveness, a steering wheel light bar guides the driver to look at the road or take back control of the wheel. Additional alerts can include visual indicators in the instrument cluster, tactile alerts in Cadillac's Safety Alert Seat and audible alerts, if necessary. In the limited event of an unresponsive driver, the Cadillac

CT6 utilizes the full capability of onboard driver assistance technologies to bring the car to a controlled stop and contact OnStar to alert first responders, if necessary."

Hawkins said "Super Cruise will be restricted to only "divided, limited-access highways—highways with defined 'on-' and 'off-ramps,'" the company says. In other words, [drivers](#) can only use the feature on [road](#) trips or highway commutes, not in cities or residential areas."

Hawkins quoted Barry Walkup, chief engineer on Super Cruise, who said in a statement, "While it is technically possible for the technology to drive hands-free on other kinds of streets and roads, we feel strongly that this targeted approach is the best to build consumer and regulatory confidence and enthusiasm for advanced mobility."

Super Cruise will be offered as an option on the 2018 Cadillac CT6.

More information: media.gm.com/media/us/en/cadillac/410-super-cruise.html

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