



Advancing and Expanding the Driver Experience with Exterior Vehicle Interaction

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Imagine you're headed out of the store. One hand holds your bags of purchases while the other has your coffee, keys and lunch-to-go. As you make your way through the crowded parking lot and spot your vehicle a few feet away, you simply say "open the trunk." Your car trunk quickly pops open, allowing you to easily place your bags inside, never needing to fumble for keys or risk dropping your much-needed coffee.

Or, imagine you're in the midst of a busy work day. You've scheduled a delivery to be placed in the trunk of your car. You give the delivery driver a one-time-use code word that they can speak aloud to gain access to your trunk, placing your items safely inside.

These seamless, convenient experiences are not something out of a science fiction movie, but rather an important part of our innovative set of solutions that transform your car's assistant into a thoughtful, AI-powered companion. In fact, this particular solution, Cerence Exterior Vehicle Interaction (EVI), is currently in proof of concept with several OEMs today, with the goal of bringing an interaction like the one above to life in new cars as soon as 2026. With the power of advanced AI, combined with the right installation approach, voice-driven interactions from outside your vehicle will become commonplace, making trips through parking lots and walks to your driveways safer and a lot more convenient.

How it Works

As experts in automotive applications of voice AI, we have done a lot of testing and research to bring Cerence EVI to life, and its potential is huge. We have found, however, there are a few key elements that are critical for OEMs to consider if they want to deliver drivers enhanced voice-powered experiences from outside the cabin.

- **Having the right microphones:** While microphones inside the car can function similar to those in other smart devices (in that they work well when the environment is known and controlled), Cerence EVI requires exterior-certified, automotive-grade microphones. This means OEMs must look at specific microphones, and their placement, early in a car's design and manufacturing planning to ensure those they choose are prepared for the snow of Alaska, the heat of Arizona and everything in between.
- **Investing in powerful voice AI software:** Beyond working in the elements, Cerence EVI applications must also be able to function in noisy environments. Imagine you park your car in a lot next to the highway in a busy metropolitan area. The system must have acoustic processing capabilities that can account for that background noise in order to carefully and flawlessly understand commands when the speaker is within a few feet of the vehicle.
- **Keeping privacy and protection front of mind:** Implementing Cerence EVI by nature means expanding a driver's connection to the car and expanding how far and wide OEMs must cast their net from a security perspective. We advise OEMs on best practices to ensure the system stays in sleep mode until a physical or digital key is identified as being within a few feet of the car. Any data that is generated through a voice interaction is then processed directly in the headunit of the vehicle and adheres to privacy regulations the same way the rest of the car's data does.



An Open Frontier

What makes Cerence EVI so exciting is not only that folks are on their way to fewer dropped coffees and faster trips to the store, but really in the potential this technology has to change the entire way we experience getting in and out of our cars. From a technical perspective, once the microphone is installed and ready to enable exterior interactions, OEMs can extend the experience beyond opening the trunk. Once people begin to gain trust with the system, other functions like opening the windows remotely or setting the radio station on their walk to the car could be enabled. The future of Cerence EVI is still being written, and OEMs have a massive opportunity to offer drivers experiences that can build brand loyalty and provide more chances for drivers and passengers to engage with the vehicle before, during, and after their rides.

For more about Cerence EVI's capabilities and to see it in action, check out [this video](#).