Cerence EVD
Emergency Vehicle Detection

Detection when it's critical

Every driver has experienced a moment of panic upon hearing or seeing an approaching emergency vehicle, especially if he or she was caught off guard when distracted by loud music, a conference call, or chatter in the backseat.

Safer, more enjoyable experience

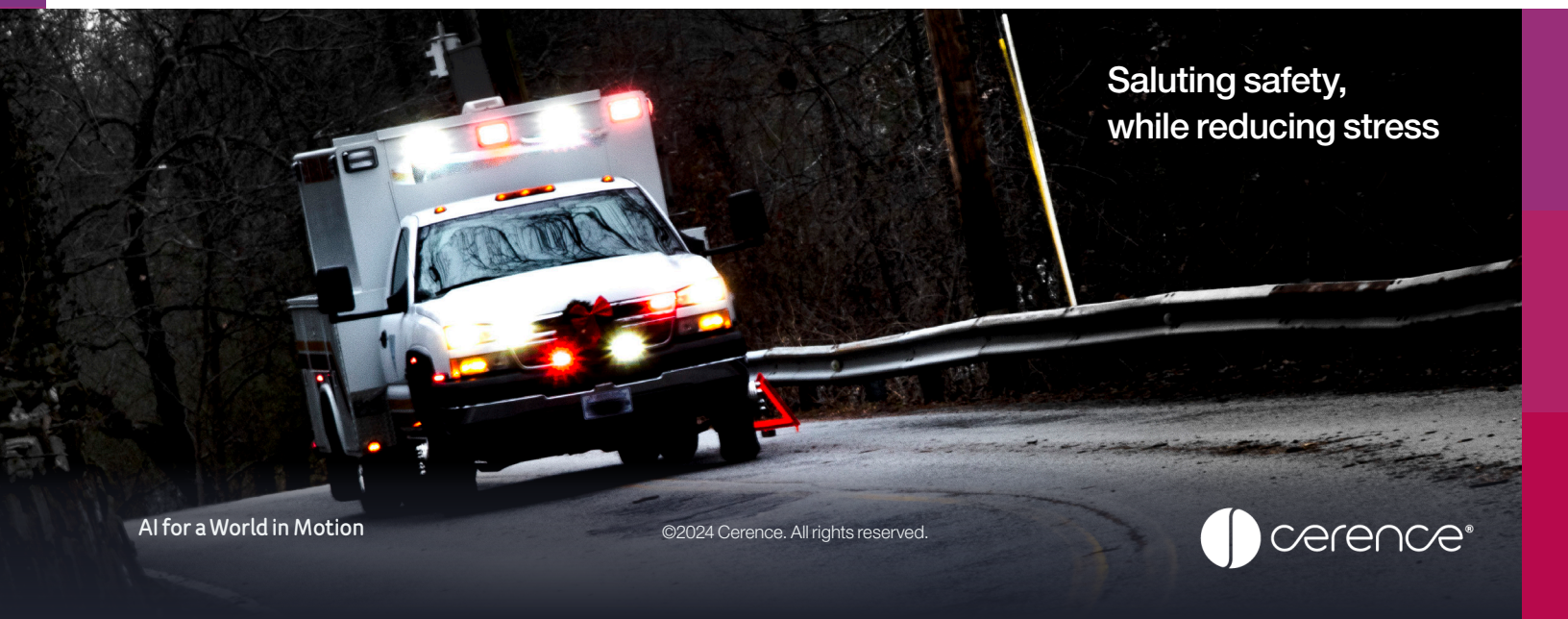
- Delivers safety for first responders and drivers
- Reduces driver stress
- Leverages Cerence Drive speech processing tech

Tested, trusted technology

- Detects 500+ sirens globally
- Range: 300 meters via interior mics; 600+ meters exterior
- Automatically alerts driver audibly and visually

The growing presence of smart technology in cars presents the opportunity to deliver safer, more enjoyable rides. And drivers are demanding this—According to a recent survey by Cerence of 1,500+ U.S. consumers, nearly half of respondents said they are looking for more assistance during stressful driving situations.

Cerence Emergency Vehicle Detection (EVD) integrates with the in-car assistant to alert drivers of approaching emergency vehicles so they can adapt their driving accordingly. It helps to ensure that drivers remain safe and informed on the road, a critical piece of the in-car experience as vehicles become increasingly autonomous.



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Seamless listening and alerting technology

Cerence EVD can be implemented without the need for additional hardware as it uses existing microphones that are part of the vehicle's interior design. It works by utilizing the distinct sound structure inherent to emergency siren signals to achieve reliable recognition of the source and the direction from which the siren is approaching. This includes varying types of sirens from various emergency vehicles (fire trucks, ambulances, police cars, etc.) from multiple countries, accounting for different styles of sirens.

Sound cancellation and in-car alerts

Once a siren is identified, the volume of the radio or other media inside the vehicle is automatically lowered, and the driver is notified via the car's visual and audio infotainment system. Additionally, by using acoustic echo cancellation to remove the music playback from the microphone signals, Cerence ensures reliable siren detection and quick driver notification, even if a driver is listening to a song that includes sirens or other sounds utilized by emergency vehicles.

Delivering safer, more enjoyable rides

Cerence EVD is part of the Cerence Drive solutions portfolio, the industry's most intuitive automotive voice assistants in the market. As part of our speech processing technology that powers Cerence EVD, we deliver robust voice user interfaces, speech communication with superior audio quality, and improved road safety. This is increasingly critical as many countries around the world legally require that drivers give way to emergency vehicles that use acoustic and/or light warning signals, as well as with the advent of autonomous vehicles, which will demand such technology to ensure safety.

Robust technology for worldwide use

Cerence EVD supports all relevant siren types that are used throughout the world: multitone, wail, yelp, phaser/piercer, warble & whoop. The technology can detect 500+ sirens from more than 150 siren generators that have been collected in 15 different countries, offering a low false alarm rate. Siren signals can be detected up to 300 meters using interior microphones and up to 600+ meters with exterior mics, depending on velocity and driving noise.