Before passengers will truly trust a driverless car, they need confidence in the basic ways they interact with the vehicle. Intel is researching and prototyping different human-machine interfaces (HMIs) and technologies to help OEMs and tier 1s address these issues of trust.

While driving, most interactions inside and outside the vehicle will require some level of understanding by the car. The car needs to determine whether what’s happening is something it needs to pay attention to and act upon, or if it’s something it can ignore. This level of understanding and decision-making requires significant coordinated data processing, learning, and management—both in the car and in the cloud.

Intel's research on the trust between passengers and autonomous vehicles looks at methods for harnessing and managing data, and how HMI can help passengers feel safe, confident, and in control.

**DEMO DESCRIPTION**

Demo visitors can explore a variety of HMI systems for autonomous driving based on the Intel® GO™ development platform for automated driving. These interfaces show different approaches for how passengers and autonomous cars could communicate with each other.

In addition, supporting videos featuring common driving situations highlight the complex decision-making that goes on behind the scenes with autonomous HMI.

**KEY POINTS**

- Autonomous systems must establish trust with passengers before passengers will feel safe, comfortable, confident, and in control
- There is a need for multiple ways of interacting with autonomous systems (touchscreens, voice, communication screens, mobile devices, etc.)
- Natural language dialogue interactions will be vital
- Redundant alerts and system messages across multiple screens and multiple modes of communication are extremely important
- HMI prototyping and testing are crucial for optimizing the technical capabilities on autonomous driving platforms