

Leddar technology for automotive in-cabin occupant detection and gesture recognition

Leddar provides a novel, cost-effective detection and ranging solution for carmakers and system developers looking to integrate low-cost, highly efficient occupant and movement detection capabilities inside the cabins of mass-produced vehicles.



Leddar benefits

- Multi-passenger detection from a single sensor
- Discrimination of static objects
- Detection of movements
- Reliable operation in all lighting conditions
- Excellent sensitivity, distance resolution, and measurement rate
- No images captured, eliminating privacy concerns

Novel optical sensors are making their appearance in automobile cabins to detect the presence of each occupant and track movements in order to enable new features, from safety and comfort to touchless controls.

With its unique, patented optical time-of-flight technology, a single Leddar sensor can replace multiple traditional sensors. Leddar enables the detection of multiple passengers as well as movements, using a multi-segment infrared light beam targeting each seat. The sensors' small, adaptable form factor makes them easy to integrate seamlessly into existing cabin components. Immune to ambient lighting conditions, Leddar performs flawlessly from bright sunlight to total darkness. Leddar is also capable of handling close proximity interactions for applications such as touchless controls and specific hand gesture recognition.

And, unlike camera vision solutions, Leddar doesn't capture or stream images: its output is a series of data points consisting of precise distance and signal amplitude measurements. Therefore, Leddar eliminates potential issues with regards to privacy protection.

With its high sensitivity and rapid measurement rate of up to 100 Hz, LeddarTech's Leddar technology is the detection and ranging solution that provides the best cost-performance ratio for your in-cabin detection and ranging applications.



Ask us about Leddar sensing technology for automotive applications: leddartech.com/en/contact-us