



NEWS RELEASE

Aptiv Introduces Advanced Occupancy Classification, The Industry's First Camera-Only Occupant Detection System

2026-06-08

Aptiv's Advanced Occupancy Classification (AOC) delivers smarter safety, simpler design and up to 40% lower system cost

SCHAFFHAUSEN, Switzerland--(BUSINESS WIRE)-- Aptiv PLC (NYSE: APTV), a global industrial technology company, today announced the launch of its Advanced Occupancy Classification (AOC) system, the industry's first occupant detection solution powered entirely by an in-cabin camera. The system simplifies vehicle architecture by eliminating traditional in-seat hardware while enabling next-generation cabin intelligence.

Aptiv's Advanced Occupancy Classification (AOC) replaces traditional in-seat hardware with a vision-based software solution—reducing both system complexity and cost.

Built on more than two decades of Aptiv leadership in occupant detection, AOC is an advanced

software solution that leverages artificial intelligence (AI) and computer vision to accurately classify occupants based on parameters such as height, weight, and body position. This enables optimized airbag deployment decisions while significantly reducing system complexity and cost for automakers.

"Aptiv's Advanced Occupancy Classification represents a strategic leap forward in cabin innovation," said Matthew Cole, Senior Vice President, Sensors and Compute, Aptiv. "By moving to a camera-only architecture, we are leading a new generation of intelligent, software-defined safety features enabled through a single sensor. AOC provides automakers with a smarter, more scalable foundation for the future of the in-cabin experience, delivering the proven performance, safety and reliability they expect from Aptiv."

Unlike conventional pressure-based occupant detection systems, AOC can work with most existing vehicle interior

cameras to accurately distinguish adults, children, infants in carriers, and inanimate objects, while also recognizing posture, size, seating position, and orientation. This enables the airbag system to suppress deployment or tailor inflation force and timing to reduce injury risk — especially important for children, smaller occupants, or out-of-position passengers.

Advanced Occupancy Classification achieved 100% accuracy across federal regulatory tests, including those evaluating how vehicles must protect occupants in frontal crashes under FMVSS 208 regulation, supporting global safety compliance and requirements.

A Platform for Smart-Cabin Intelligence at Lower Cost

By removing airbag in-seat hardware, AOC significantly streamlines system architecture. A single interior camera replaces multiple sensors and wiring, lowering bill-of-materials cost by up to 40% while reducing assembly effort and improving scalability across vehicle platforms.

The simplified architecture also gives automakers greater flexibility, enabling thinner seat profiles and easier integration of comfort features such as heating, cooling and massage, without compromising safety performance.

OEMs can also leverage the same interior camera to deliver more than 15 additional safety and comfort functions, including seatbelt-status monitoring, driver-attention tracking, gesture recognition, body-pose analysis and hands-on-wheel detection, among others.

Aptiv's machine learning and logic fusion capabilities integrate inputs from multiple sensors, AI models and key vehicle data to deliver highly stable, robust occupant classification, while the over-the-air upgradable system provides OEMs with a future-resilient solution that adapts as safety regulations evolve. This reduces redesign costs, extends hardware life, and enables new features over time without adding sensors or increasing integration complexity.

Advanced Occupancy Classification extends Aptiv's commitment to continuous innovation and helping customers deliver safer, more intelligent, and more cost-effective vehicles.

AOC will be showcased as part of a live vehicle demo at **InCabin USA** stand 20, taking place June 9–11, 2026, at Huntington Place in Detroit. Beyond AOC, the display will highlight additional Aptiv's driver and cabin monitoring features, Cockpit Sound Suite, Android Automotive Framework and more.

To learn more, visit Aptiv's **AOC webpage**.

About Aptiv

Aptiv PLC (NYSE: APTV) is a global industrial technology leader delivering advanced solutions people trust when it matters most across automotive, commercial vehicle, aerospace and defense, telecom and datacom, and other diversified industrial end markets. Our differentiated portfolio enables devices and systems to sense, think, act, and continuously optimize performance. Building on decades of innovation, Aptiv brings global scale and a resilient, localized value chain to customers across the globe. Learn more at **[Aptiv.com](https://www.aptiv.com)**.

Lisa Scalzo

Aptiv Corporate Communications

lisa.scalzo@aptiv.com

Ariel Gavilan

Aptiv Corporate Communications

ariel.gavilan@aptiv.com

Source: Aptiv PLC