

# Vehicle Technology Resource Alerts

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## Advanced Driver Assist Systems (ADAS)

- **What it is:** Advanced Driver Assistance Systems (ADAS) are active safety technologies developed to automate vehicle systems for safer driving.
- **How it Works:** ADAS features alert drivers to potential problems with warnings or enhance vehicle control to prevent collisions before they happen.
- **Why it's Hot:** ADAS technologies and applications are one of the fastest-growing segments in automotive electronics.

## Advanced Driver Assist Systems 101

**Electronic Stability Control (ESC)** applies braking to individual wheels during sudden turns so that the driver will not lose control of the vehicle. ESC ensures that the vehicle travels in the direction intended by the driver.

**Lane-Departure Warning (LDW)** monitors lane markings and alerts the driver if a vehicle appears to be inadvertently drifting into an adjoining lane.

**Forward-Collision Warning (FCW)** recognizes when a vehicle gets too close to another vehicle and signals the driver to apply the brakes to avoid a collision. Each vehicle equipped with these advanced technologies must meet certain performance requirements for that technology to be promoted by NHTSA.

**Adaptive Cruise Control (ACC)** uses radar and camera systems to track vehicles ahead and adjust speed accordingly. While regular cruise control holds the car at a steady velocity until the driver intervenes, ACC will speed or slow the vehicle based on the position of the cars ahead of it. ACC combined with LDW is today's most common form of automated driving on highways.

**Automatic Emergency Braking (AEB)** is a sensor-based technology that detects a forward crash with another vehicle or pedestrian before it occurs and alerts the driver to take corrective action or automatically applies the brakes.

SEMA companies seeking to leverage and capitalize on the latest ADAS technologies, as well as create new business opportunities with products and accessories that integrate ADAS capabilities need to pay particular attention to the evolving regulatory and legal landscape, shifting consumer and social demand patterns and automotive cybersecurity challenges to ensure that ADAS systems are operating as intended after vehicle modification and customization.

Delivering more synchronized ADAS and infotainment product strategies and solutions can help drivers take full advantage of the active safety technology installed on new vehicles, or available as aftermarket upgrades for current vehicles. An example would be building relevant ADAS information into the infotainment system to create a more effective and seamless human/machine interface. SEMA's vehicle technology programs, ETTN, government-affairs expertise and SEMA Garage services and benefits are available to help members continue growing and prospering in the evolving automotive specialty-equipment industry.

To learn more about ADAS systems and how advanced vehicle technologies and trends are transforming the performance industry contact [Bryan Harrison, SEMA Director of Networks](#), or [John Waraniak, Vice President of Vehicle Technology](#).

