Advanced Driver Assistance Systems (ADAS): It’s Not What, It’s How

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As sales of EVs continue to increase at a rapid rate, it is clear that the transition towards EV is gaining pace. According to the most recent findings from Counterpoint’s Global Passenger Electric Vehicle Market Share Report there was a notable 25% year-over-year increase in global sales of passenger battery electric vehicles (BEVs) in the last quarter of 2023. Remarkably, sales of BEVs are expected to exceed 45 million by 2030 with a CAGR of 25% between 2023 and 20301.

With the tide turning in favor of EVs, automakers are faced with the clear challenge of how to adapt to this age in order to remain competitive in the years ahead. The automotive industry, known for its longstanding competitive advantage in engine design and production capability, is now faced with the imperative to adapt and evolve. As a behemoth within the sector, this industry must embrace a process of transformation to navigate the changing landscape.

With crucial deadlines around the phase-out of internal combustion engine (ICE) vehicles fast approaching, it would be prudent for OEMs to turn their attention towards other technologies that will have a major bearing on their future success. Although there are many potential options to choose from, ADAS (Advanced Driver Assistance Systems) is undoubtedly one of the frontrunners, making it worthy of special attention.

In a US survey of the most important factors influencing consumer car purchasing decisions, safety ranked in second place, only behind fuel efficiency. This trend is likely to intensify as we progress into more advanced levels of vehicle autonomy. In this new landscape, the success of ADAS in yielding measurable safety improvements, and in reinforcing a perception of safety, is what will separate the winners from the ones who are left behind.

A large portion of OEMs partner with suppliers to develop ADAS. How this partnership works in practice can vary from situation to situation but broadly, the OEM provides the supplier with a selection of requirements that the newly developed system will need to fulfil, spanning a whole range of technical, performance and regulatory considerations. From here, the supplier will then develop a conceptual design that will be refined over the time and subjected to ongoing simulation and testing to ensure it performs in a practical setting. Through an iterative process of trial and error, a final design is then agreed upon in readiness for production and use in vehicles.

This traditional relationship is quickly evolving as OEMs increasingly work in closer partnership with suppliers to understand ADAS hardware design, learning how they relate to overall success. This involves delving into the detail of how the choice of components and materials that comprise these systems can ultimately determine whether their brand is seen as a safe option for end-users, or not. As it turns out, the "how" behind ADAS is just as important as the "what" when it comes to shaping consumer perception of a brand.

To truly get a grip on the "how" of ADAS, automakers need to work closely with suppliers to ensure that the components and materials used in their ADAS are of the highest quality and meet rigorous safety standards. By doing so, they can build trust with consumers and

establish a reputation for excellence in safety. But it's not just about the technical details of ADAS. It's also about the messaging and marketing surrounding these systems. Automakers need to communicate the benefits and capabilities of their ADAS in a clear and compelling way, highlighting how these systems enhance safety and improve the driving experience.

Ultimately, getting a grip on the "how" of ADAS is essential for automakers who want to create a strong brand reputation and establish themselves as leaders in the industry. By paying close attention to the details of how their ADAS are designed, made, and marketed, automakers can win and maintain the trust and loyalty of consumers who value safety and reliability above all else.

ADAS serves to increase the safety of passengers and vehicles and the reliability of the systems is related to the hardware. MacDermid Alpha works with many automotive OEMs as a partner for electronic component materials. These materials can make a significant contribution to increasing the robustness; thus extending the service life of electronic components. We have the solutions to make your safety hardware more reliable.

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