

# ZF and SiliconAuto showcase new I/O interface chip for automotive high-performance computers

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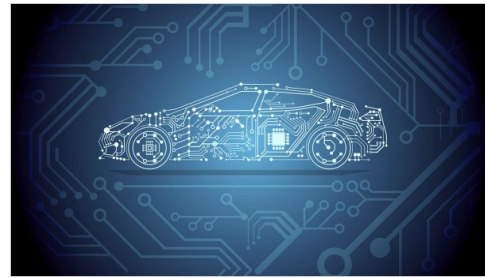
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**The new architecture offers a scalable alternative to traditional solutions, enhancing ADAS and autonomous driving with improved sensor data processing and flexibility**

At the embedded world 2026 electronics exhibition in Germany, ZF and SiliconAuto unveiled a new input/output (I/O) interface chip and microcontroller design aimed at enhancing automotive high-performance computers for autonomous driving. This marks the first



*Source: Getty/kaptnali*

live demonstration of real-time sensor data acquisition and pre-processing on silicon for next-generation autonomous driving systems. The design combines a new ZF I/O interface chip with SiliconAuto's XMotiv M3 microcontroller, serving as a safety controller. This architecture proposes an innovative alternative to traditional monolithic system-on-chip solutions, presenting a scalable, cost-effective and high-performance option for autonomous driving.

The solution, showcased by ZF and SiliconAuto, supports advanced driver assistance systems and automated driving (AD) by integrating automotive sensor-interface IP alongside capabilities such as camera image signal processing and radar signal processing. It is designed to be compatible with any performance SoC chosen by original equipment manufacturers due to standardized high-speed interfaces such as PCIe and Ethernet. This flexibility allows for clear scalability across different vehicle segments and reduces power consumption through efficient data transfer techniques.

Manufactured in a lower-cost processing node, the chip offloads sensor data tasks, liberating CPU resources on the performance SoC to focus on perception and driving functions. The architecture supports future upgrades, allowing for chip updates without full system redesigns. The ZF/SiliconAuto solution enables OEMs to select their preferred compute platforms, providing an alternative to leading market solutions by reducing CPU load and enhancing system efficiency.

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