

Meeting the latest challenges of Automotive Ethernet



A joint approach for current and future in-vehicle Ethernet networks

As software-defined vehicles and advanced driver assistance systems continue to evolve toward L3, L4, and L5 autonomy, robust in-vehicle networking has become essential. Elektrobit and Realtek are combining their expertise to deliver a scalable, high-performance software platform for automotive Ethernet switches, enabling next-generation connectivity, functional safety, and efficient E/E architectures for future vehicles.



Tailor-made concept, combining SW and HW expertise

Elektrobit

EB zoneo SwitchCore

Running on a dedicated CPU core inside the Ethernet switch hardware, EB zoneo SwitchCore delivers autonomous switch operation without relying on the Host MCU. It independently manages and configures Ethernet PHYs through the integrated AUTOSAR EthTrcv modules, ensuring reliable and efficient network initialization.

In addition, SwitchCore seamlessly exchanges health information and network statistics with the Host MCU via EB zoneo ACM8 EthSwt. Delivered as a pre-compiled binary with post-build configuration support in EB tresos Studio, it enables fast integration and maximum flexibility for modern zonal E/E architectures.

Realtek

RTL9072Dx Series Integrated Automotive Ethernet Switch

The RTL9072Dx Series is Realtek's flagship Automotive Ethernet switch solution, available in 12-port and 10-port configurations. It integrates multiple 100/1000BASE-T1 Automotive Ethernet interfaces and supports up to 10G high-speed connectivity, enabling sensors, ECUs, gateways, ADAS platforms, and central computing systems to be connected through an efficient and scalable in-vehicle network architecture.

The product also integrates an ARM Cortex-R52 dual lock-step CPU architecture to enhance real-time control, diagnostics, management, and functional safety support.



Benefits

Lower CPU load
on the Host MCU

Faster network
startup

Optimized
HW BOM

Fast integration
in the project