

Fuel injection control

Optimization of **embedded software** for diesel fuel injection control

Customer's requirements

The customer's request involved maximising functional reliability by means of additional basic conditions as well as optimizing system compatibility.

This should reduce errors and failure frequency. A modularization of the software architecture should increase maintainability.



Technologies used

CANoe, CAN, Keil, iSystem, Agilent

Project type

Embedded development

comlet solution

comlet's embedded team carried out a static code analysis and subsequently divided the code basis into functional parts.

The following tasks were carried out:

- optimization of A/D conversion resulting in higher accuracy and plausibility.
- optimization of CAN data transmission by means of individual repetition times for each ID.
- Extended recognition of driving conditions by analysing CAN and analogue data.
- Adaptation to different CAN buses (Motor Can, Chassis-CAN)
- Redundant calculation of the motor rotation speed.
- Correction of the IRQ priorities.
- Protection of the variables against unintentional changes.
- Implementation of a power limiter controlled by exhaust gas temperature.

