



FlexRay-Based Optimization of Data Communication
Audi A8 – The Sportiest Sedan in the Luxury Class

TTTech

“We are pleased that TTTech Automotive could make a significant contribution to the introduction of time-triggered technology for such an outstanding vehicle.”

Stefan Poledna
Founder and Member of the Executive Board
TTTech Computertechnik AG



Fascinating sportiness, innovative technology and superior comfort: The Audi A8 demonstrates the brand's proverbial "Vorsprung durch Technik" with its light aluminum body, its powerful and highly efficient engines, the further improved MMI operating system, new driver assistance systems, the full LED headlights and an elegant interior with a craftsman's level of workmanship. With all this technology the new Audi A8 offers the perfect synthesis of dynamics, perfection in design, workmanship and pioneering efficiency.



MMI navigation plus is networked in a novel fashion with the advanced driver assistance and safety systems. It follows the route in advance during driving and provides the data to the control units for the automatic transmission, the headlights and for the ACC stop & go function. Their enhanced intelligence enables these systems to recognize complex scenarios and to make anticipatory decisions to assist the driver. The new technologies include a night vision assist with marking of detected pedestrians, the Audi pre sense safety system as well as a speed limit display.



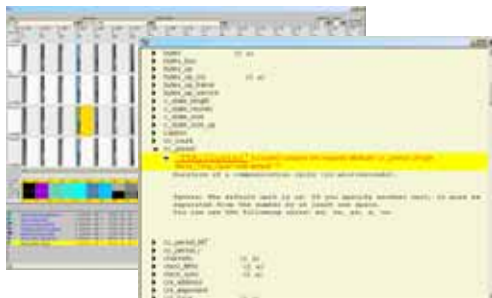
The new A8 also documents its standing as the sportiest luxury sedan on the market in the chassis sector. The distribution of the axle loads is balanced, and all wheel control arms are aluminum. The adaptive air suspension together with adaptive damping is always on board, forming part of the Audi drive select vehicle dynamics system, also standard. The optional dynamic steering is a supplementary component.

“Our cooperation with TTTech showcases Audi’s leadership in automotive electronics.”

Ricky Hudi
Chief Executive Engineering Electric/Electronics
AUDI AG



Audi and TTTech have been cooperating closely in the field of time-triggered systems since 2001. A major result of this cooperation is the introduction of FlexRay in the Audi A8 to optimize its data communication. The networking of the Audi A8 was confronted with two important changes. The first one included increasing bandwidth of the body-electronics network to reduce complexity and enable ECU exchangeability. The other change was the introduction of FlexRay for chassis and driver assistance innovations and hence the introduction of AUTOSAR standard-software components for the communication layers.



The precondition for bringing FlexRay into commercial production was the evaluation of different E/E architectures and topologies. Their selection was dependent on the different E/E functionalities that were intended to be integrated into the new Audi A8. For this purpose TTTech Automotive provided both various FlexRay-based development tools and services for architecture optimization and topology analysis and validation.



The use of FlexRay in commercial production requires appropriate validation and optimization measures as well as the implementation, integration and testing of new embedded software components. TTTech Automotive solutions help Audi to support those processes and to make sure that cost and quality goals are met. AUTOSAR standard software, standard software configuration tools, hardware and testing tools, physical layer testing and on-site project support were contributed by TTTech Automotive.

About TTTech Automotive GmbH

TTTech Automotive GmbH is a subsidiary of TTTech Computertechnik AG and acts as implementation partner for automotive electronics and software. The company's mission is to further optimize the performance and cost of automotive networks by providing reliable networking solutions. TTTech Automotive offers know-how ranging from the physical layer to COM stack software and configuration and testing tools as well as the development of safety-relevant functionalities up to SIL 3 / ASIL D. In addition, the company offers consulting and support services. It is a premium member of the FlexRay and AUTOSAR consortia and endorses these open standards for automotive electronic architectures with its products and solutions.

Further information is available at
www.tttech-automotive.com

About AUDI AG

Audi is among the most successful brands globally. In selling one million vehicles worldwide in 2008, AUDI AG recorded its 13th consecutive record year for sales and profits. The company is active in more than 100 markets worldwide. The Audi line up is one of the freshest in the industry with 23 models, including 12 models launched during model years 2008 and 2009. AUDI AG's wholly owned subsidiaries include Automobili Lamborghini Holding S.p.A. in Sant'Agata Bolognese (Italy) and quattro GmbH in Neckarsulm. Audi currently employs around 57,000 people worldwide, including 45,000 in Germany. The brand with the four rings invests more than € 2 billion each year in order to sustain the company's technological lead embodied in its "Vorsprung durch Technik" slogan. Audi plans to significantly increase the number of models in its portfolio by 2015 to 40.

Further information is available at
www.audi.com

The logo for TTTech, featuring the letters 'TTTech' in a bold, blue, sans-serif font. The 'T's are significantly larger and more prominent than the 't's.

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