



TTTech

AthosMotion – Central platform ECU for automated driving

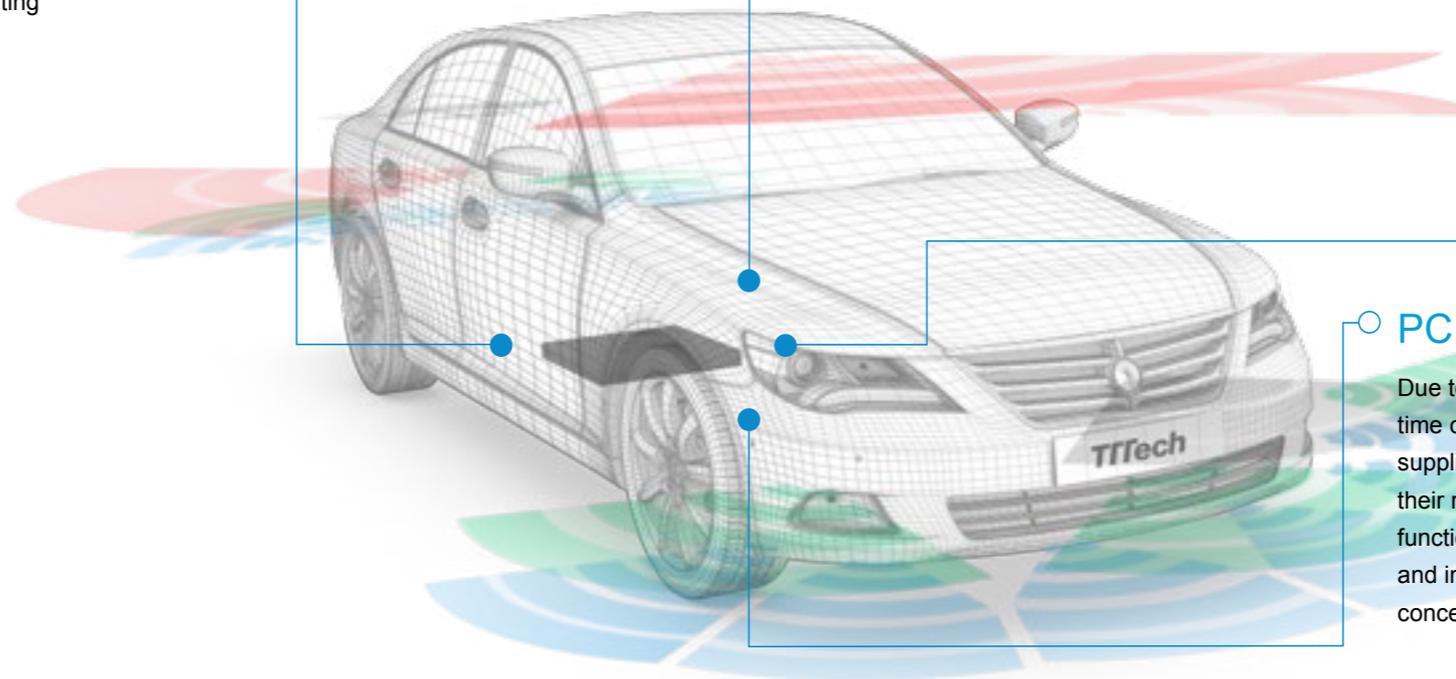
High-performance platform
solution for automated driving

AthosMotion for automated driving

TTTech Automotive has developed the high-performance platform solution AthosMotion, specifically addressing rapidly increasing requirements for driver assistance systems (ADAS). These requirements include automatic parking, piloted slow-driving at traffic jams, automatic headlights adjustments and road sign recognition, lane assistance, adaptive cruise control and emergency brake assistance.

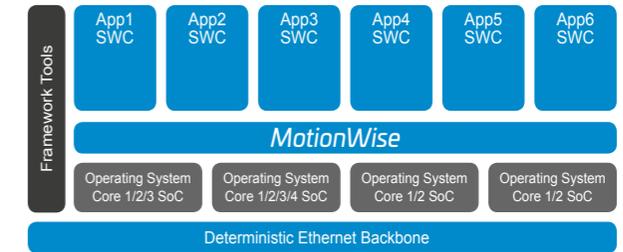
The AthosMotion architecture is very scalable. The design of multi-core SoCs, which can run in parallel with different operating systems (AUTOSAR, VxWorks, Linux, etc.), depends on the number and power requirements of the entirely encapsulated applications (currently several dozen simultaneously).

An important part of the platform controller is TTTech's Deterministic Ethernet. This reliable and real-time-capable Ethernet backbone solution enables the combination of data traffic of different criticality with a high data throughput.



Integration

This sophisticated software package is located and running as a middleware between CPU-level and the integrated applications. It provides each application with CPU-time and memory needed but at the same time separates hardware from applications. Therefore origin of data and data usage are strictly decoupled (location transparency). Further benefits include simultaneous support of various safety levels while ensuring "Freedom from Interference" and ease of software integration.



Scalability

The AthosMotion platform has a scalable architecture that can be configured flexibly to fit customer requirements for building a series production ECU, without the need to modify application software. In prototyping use, the AthosMotion platform is easily extended with external building blocks e.g. for image processing. An external Deterministic Ethernet switch can also be used to integrate additional AthosMotion modules for simulating a fail-operational setup.

PC Co-Simulation

Due to provided co-simulation a remarkable amount of time can be saved during the development process. Each supplier tests and integrates applications individually into their respective execution boundaries set up by TTTech. For functional testing all applications are then integrated by TTTech and immediately able to run together. Thanks to the overall concept, violations by SWCs, bugs are detected very easily.

Taking the right turn with safe and modular solutions from TTTech

Vienna, Austria – Headquarters

Phone: +43 1 585 65 38-5000
office@tttech-automotive.com

Germany

Phone: +49 841 88 56 47-0
office@tttech-automotive.com

USA

Phone: +1 978 933 7979
usa@tttech.com

Japan

Phone: + 81 52 485-5898
office@tttech.jp

China

Phone: +86 21 5015 2925-0
china@tttech.com

www.tttech.com

