SOFTWARE SOLUTIONS
Driving the Future of Motion Control

As your strategic partner for safety-critical motion control software and vehicle integration expertise, we act as an extension of your software and engineering teams to support your business goals, drive efficiencies and help bring your software-defined vehicles (SDVs) to market faster.

Our proven software features, functions and services include:

- **Advanced Steering**
  - Software for tailored, safety- critical steering
- **Advanced Safety**
  - Road Surface Detection
  - Steer-by-Brake
  - Hands On/Off Detection
- **Vehicle Health Management**
  - Chassis System Health & Prognostics
  - Tire Health & Parameter Detection
- **Software Development**

YOUR GO-TO SOFTWARE PARTNER FOR:

Agile Software Development
Focused on delivering innovative software solutions for advanced safety, performance and convenience with speed, flexibility and seamless vehicle integration.

Proven Industry Leadership in Safety-Critical Solutions
Produced 100+ million Electric Power Steering (EPS) systems that include varying levels of software and cybersecurity per our OEM customers' requirements.
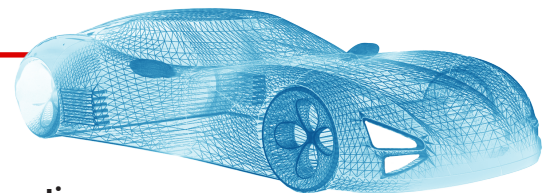
Global In-House Ownership
Driving efficiencies in design, production-intent software development, testing and validation through our talented global team of software and engineering experts.

Strong Collaboration & Flexibility
Committed to working closely with your team as a strategic partner to co-develop innovative solutions every step of the way – ensuring the final solution is tailored to you.

Our in-house software development adheres to stringent levels of quality and compliance with customer specifications, industry protocols and regulations.

ACCELERATE & SIMPLIFY YOUR SOFTWARE DEVELOPMENT

Software Architecture & Feature Development
Efficient system integration and feature development across chassis components, enabling coordinated control across subsystems and multiple actuators for all E/E architecture types – traditional, domain and zonal.

Cybersecurity & Safety
Proven experience, accredited to many successful product launches, in integrating embedded software with multi-layer cybersecurity for maximum protection and enhanced product safety nets.

Vehicle Integration
Years of expertise in seamless integration of embedded automotive software into the vehicle – from start of requirements to the end of vehicle lifecycle.

Software Validation
Complete testing and validation capabilities - with platforms ranging from full system HiL to virtual ECU tools – for greater cost and time efficiencies.

HOW OUR SOFTWARE SOLUTIONS SOLVE MOTION CONTROL CHALLENGES:

ADVANCED STEERING

The software-defined steering system (combined with Steer-by-Wire [SbW]) enables advanced safety and performance features not possible with traditional steering systems, while also opening new possibilities for vehicle lightweighting and packaging flexibility.

- **Dynamic Variable Steering Ratio** allows you to tailor the vehicles' responsiveness through almost limitless steering tuning options – enhancing stability control, braking distance and maneuverability.

- **High Availability Steering** technologies (available with both SbW and EPS) include simultaneous, multi-path processing software that ensures the steering safety net is always on across all ADAS and autonomous driving levels.

- **Quiet Wheel™ Steering** adds another level of safety, convenience and comfort for drivers by allowing the steering wheel to remain still during SAE ADAS Levels 2-5 maneuvers, as well as automated driving applications.

ADVANCED SAFETY

Our specialized expertise in safety-critical steering and software will play a key role in the future of motion control. With no additional hardware required, our solutions offer a cost-effective approach to real-time access of new safety features.

- **Road Surface Detection** enables the vehicle to "feel the road" by collecting and interpreting road friction data in real-time and gives a "heads-up" to trailing vehicles via cloud-based communications.

- **Steer-by-Brake** provides another back-up safety-layer by using the vehicle's electronic brakes to steer the vehicle while also controlling its speed.

- **Hands On/Off Detection** uses virtual sensors to detect when the driver's hands are on or off the wheel while in autonomous driving mode.

VEHICLE HEALTH MANAGEMENT

Our software solutions improve overall vehicle health management and gives vehicle owners new insights that enable proactive maintenance and convenient scheduling.

- **Chassis System Health & Prognostics** help predict issues at the component level before they occur – allowing for conveniently scheduled maintenance and helping avoid vehicle downtime.

- **Tire Health & Parameter Detection** uses smart tire virtual sensors to monitor the tire condition and tire/road condition fit automatically – providing accurate ongoing measurement.

Nexteer is a global expert in motion control software – offering proven, safety-critical feature development, production-intent software and validation.

Let's Explore Solutions to _YOUR_ Software Challenges.

Contact softwaresales@nexteer.com

Visit Nexteer.com/Software for more details.

nexteer AUTOMOTIVE

a leader in intuitive motion control