

ADVANCED STEERING TECHNOLOGIES

Enabling a new era of safety and performance for today's world & an increasingly automated future

Choose Nexteer's Assisted & Automated Driving Enabling Technologies for:

- **Motion control specialists** in safety-critical solutions
- **Systems integration expertise** at the vehicle level
- **Highly-skilled, cross-functional** engineering teams
- **Ability to conceptualize** and industrialize across the globe
- **Speed of invention**, agility and customer responsiveness
- **Innovative software solutions** from a global in-house team of experts who lead software development, innovation, validation and production support



Click on the following images to see our technology in action.

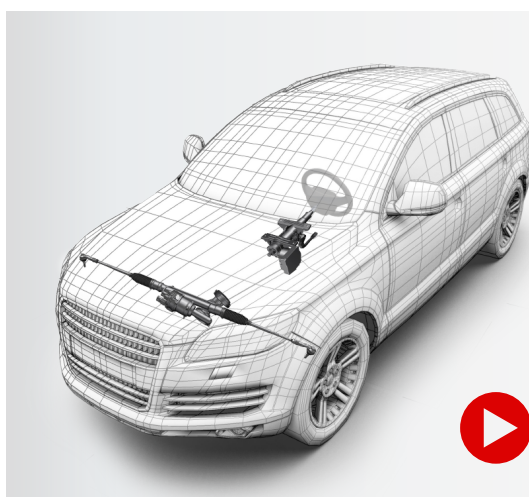
OUR ADVANCED STEERING TECHNOLOGY SUITE

Delivering Motion Control Solutions for Today & Tomorrow across SAE ADAS Levels 2 – 5

STEER-BY-WIRE (SbW)

Serves as the center link in our advanced steering technology suite and supports traditional and varying levels of automated driving (SAE ADAS 1-5). SbW replaces the mechanical steering connection between the handwheel and roadwheels with algorithms, electronics and actuators.

- **Opens new possibilities for advanced safety and performance features** like Automatic Emergency Steering, variable ratio steering, and enhanced stability control and braking distance
- **Offers packaging flexibility and reuse of components** across vehicle platforms including left-hand drive and right-hand drive applications
- **Immerses the driver in a "branded" driving experience** (sporty, luxury, comfort, etc.) – differentiates an OEM's brand through an uncompromising steering feel



HIGH AVAILABILITY EPS

Ensures the steering safety net is always on through software designed for simultaneous, multi-path processing and hardware redundancies. This is safety-critical and foundational as the industry moves toward varying levels of automation (SAE ADAS Levels 2-5 and <10 FIT systems)

STOWABLE STEERING COLUMN

Redefines the driver's experience by allowing the steering wheel to retract during hands-off, automated driving or when the vehicle is not in motion – increasing available space for driver comfort and other activities.

QUIET WHEEL™ STEERING

Allows the steering wheel to remain still during automated driving – even while in the process of turning. This eliminates potential distractions and hazards of a fast-rotating steering wheel in front of the driver during hands-off driving – enhancing safety and sense of peace in the cabin.

STEERING ON DEMAND™ SYSTEM

Enables safe, intuitive transitions of steering control between traditional and automated driving in vehicles capable of SAE ADAS Levels 3+.

MAGNETIC TORQUE OVERLAY (MTO)

Delivers ADAS capabilities for drivers of heavy-duty trucks and up to Class 8 commercial vehicles – improving comfort, reducing driver fatigue and enhancing safety for the truck driver and others sharing the road.

NEXTEER'S ADVANCED STEERING TECHNOLOGY & MEGATRENDS

ADAS/AUTOMATED DRIVING

Our comprehensive suite of advanced steering technology enables advanced safety and performance for SAE ADAS Levels 2 – 5.

ELECTRIFICATION

SbW offers packaging flexibility for large batteries, component reuse and parts standardization for electric vehicles and across vehicle platforms.

SOFTWARE

SbW and High Availability EPS require more complex code for their advanced steering features, while Nexteer's electrical architecture enhances cybersecurity by validating steering commands.

MOBILITY AS A SERVICE (MaaS)

SbW and our >10 FIT systems are key enabling technologies for autonomous people movers and goods delivery vehicles.

CONNECTIVITY

Advanced steering software, OTA (over the air) updates, advanced EPS, SbW and integrated motion control systems (steering + braking) will play key roles in connected, V2X (vehicle-to-everything) environments.