



PRESSE-INFORMATION
PRESS RELEASE

Seite 1/5, 20.12.2022

CES world premiere: Connectivity platform ZF ProConnect securely connects vehicles with cloud and infrastructure

- **ZF ProConnect connects automated, software-defined vehicles to the cloud and infrastructure**
- **Connectivity solution meets strictest safety and security standards**
- **ZF partner Hexagon demonstrates high-precision satellite navigation for automated driving in a demo car at CES 2023**

Friedrichshafen (Germany) / Las Vegas (USA). Highly automated, software-defined vehicles and digital services of the future require strong networking and the exchange of large amounts of data. The ZF ProConnect connectivity platform connects vehicles with the cloud and with the traffic infrastructure. The platform is one of the first on the market to meet the highest security requirements. The first major order from an international vehicle manufacturer has already been received – the product will go into series production in 2025. Visitors to the Consumer Electronics Show (CES) in Las Vegas, Nevada, from January 5 to 8, 2023, will be able to experience the technology in a demo car from autonomy and positioning specialist Hexagon.

For the deployment of advanced driver assistance systems – and later autonomous vehicles – vehicles must be able to network with the outside world in a wide variety of ways. Enormous amounts of data have to be exchanged - quickly and reliably via many different interfaces. The ZF ProConnect connectivity platform gives future vehicle generations this high-end networking capability. The communication solution will celebrate its official world premiere at CES 2023.

Key component for software-defined vehicles

By mastering standards such as DSRC (Dedicated Short-Range Communication), C-V2X and vehicle-to-everything (V2X)

ZF Group
Global Corporate &
Marketing Communications
88038 Friedrichshafen
Deutschland · Germany
press.zf.com



PRESSE-INFORMATION
PRESS RELEASE

Seite 2/5, 20.12.2022

communication, ZF ProConnect enables communication with roadside infrastructure such as traffic lights. ProConnect can also receive information about a sudden end to a traffic jam behind a curve or an approaching ambulance on duty and warn the driver. The high-performance computer ZF ProAI – the most powerful supercomputer for the automotive industry – processes the data supplied by ProConnect, combines it with existing sensor and other vehicle data, derives safe driving strategies using artificial intelligence, and passes these on as action commands to the actuator systems. In interaction with ProAI, ProConnect is a central piece of the puzzle for the software-defined vehicle – a basic prerequisite for the mobility of the future and its data-based business models.

ZF ProConnect enables a wide range of digital services: In addition to over-the-air updates, which can continuously update the software in the vehicle or temporarily expand it on-demand, this can also include, high-resolution map data for ADAS comfort functions for automated overtaking, which requires precise positioning data. The transmission of sensor and diagnostic data also requires connectivity – for example, to report road conditions (e.g., potholes, wetness, snow, ice...) to the cloud. For autonomous vehicles, services such as orchestrated fleet management, interactions with smartphone apps (service information, timetables, etc.), remote control or even communication and interaction with control centers of autonomous shuttles play an important role. These can only be realized via reliable networking of the vehicles, leading to enhanced comfort and safety.

"Vehicles need V2X communication so that they can exchange with other road users, the infrastructure and the cloud. With ZF ProConnect, we are also opening the door to digital business models for our customers, which are playing an increasingly important role in the software-defined vehicle," says Oliver Briemle, Head of AD Components & Connectivity at ZF.

As one of the first systems on the market, ProConnect also meets international automotive grade requirements such as the ISO 26262



PRESSE-INFORMATION
PRESS RELEASE

Seite 3/5, 20.12.2022

standard for electrical/electronic systems, the functional safety criteria according to ASIL-B(D), and the cybersecurity standard ISO/SAE 21434. This provides a vehicle with the best protection against external access without authorization. At the same time, it offers vehicle manufacturers maximum flexibility: ZF ProConnect is extremely compact and scalable at 8.6 x 6.7 x 2 inches – thanks to modular hardware and software.

ZF ProConnect delivers precise navigation for automated driving

When it comes to automated and autonomous driving, the connectivity platform can show off its full networking capabilities: The system supports the LTE and 5G mobile communications standards, is Bluetooth- and WiFi-enabled, and can also connect vehicles to the Global Navigation Satellite System (GNSS), which enables a vehicle's position to be determined with centimeter precision via satellites. ProConnect also obtains the necessary map material via the cloud. This high-precision localization, provided by Hexagon's TerraStar-X Correction Services and software positioning engine, complements the vehicle's environmental sensors and enhances redundancy and safety. In addition to the comprehensive connectivity solution, a much smaller ProConnect module is also available, which primarily provides satellite positioning.

At CES, ZF will demonstrate how well and accurately the system contributes to the satellite navigation of the future in a demo vehicle from partner Hexagon, a leading software and data management provider in the field of autonomous mobility: "The transformative potential of autonomous mobility has been a focus of ours for years, both on-road and off-road," says Hexagon President and CEO Ola Rollén. "We're thrilled to partner with ZF, a world leader in automotive electronics and control systems, to ensure this future is safe and works reliably. The partnership is a natural next step as we continue advancing safety and automation in the automotive and transportation industries."

Interested in a ride in the Hexagon-ProConnect demo car at CES? Go to the registration [here](#).



PRESSE-INFORMATION
PRESS RELEASE

Seite 4/5, 20.12.2022

Captions:

- 1.) Thanks to ZF ProConnect, various means of transport communicate securely and reliably with infrastructure, cloud applications, and satellite navigation systems, for example - crucial capabilities for next-generation mobility.
- 2.) ZF ProConnect enables reliable data exchange for automated driving and V2X communication - as a compact, scalable unit.

Images: ZF

Press contacts:

Andreas Veil, Head of External Communications,
phone: +49 7541 77-7925, email: andreas.veil@zf.com

Martin Ehrenfeuchter, Autonomous Driving and Shuttles,
phone: +49 7541 77 963 248, email: martin.ehrenfeuchter@zf.com

About ZF

ZF is a global technology company supplying systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains of Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive product and software solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate and enhancing safe mobility.

With some 157,500 employees worldwide, ZF reported sales of €38.3 billion in fiscal 2021. The company operates 188 production locations in 31 countries.

For further press information and photos, please visit: www.zf.com

About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity,



PRESSE-INFORMATION
PRESS RELEASE

Seite 5/5, 20.12.2022

quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 23,000 employees in 50 countries and net sales of approximately 4.3bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us [@HexagonAB](https://twitter.com/HexagonAB).