

# Collision Mitigation System for City Buses

Providing active braking support tailored to city bus applications in complex urban environments

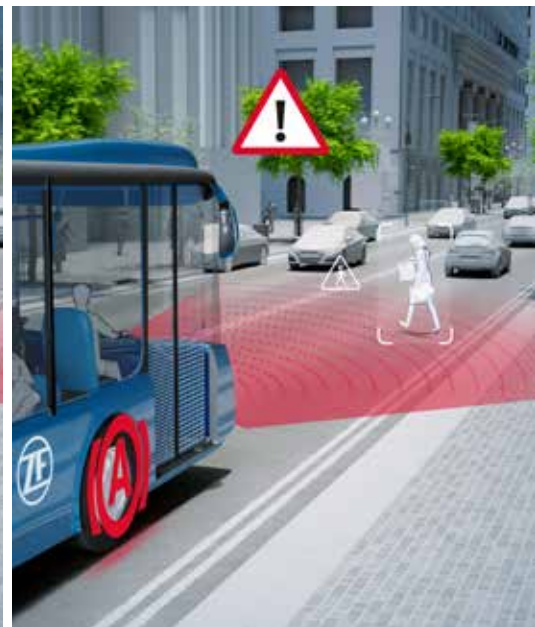


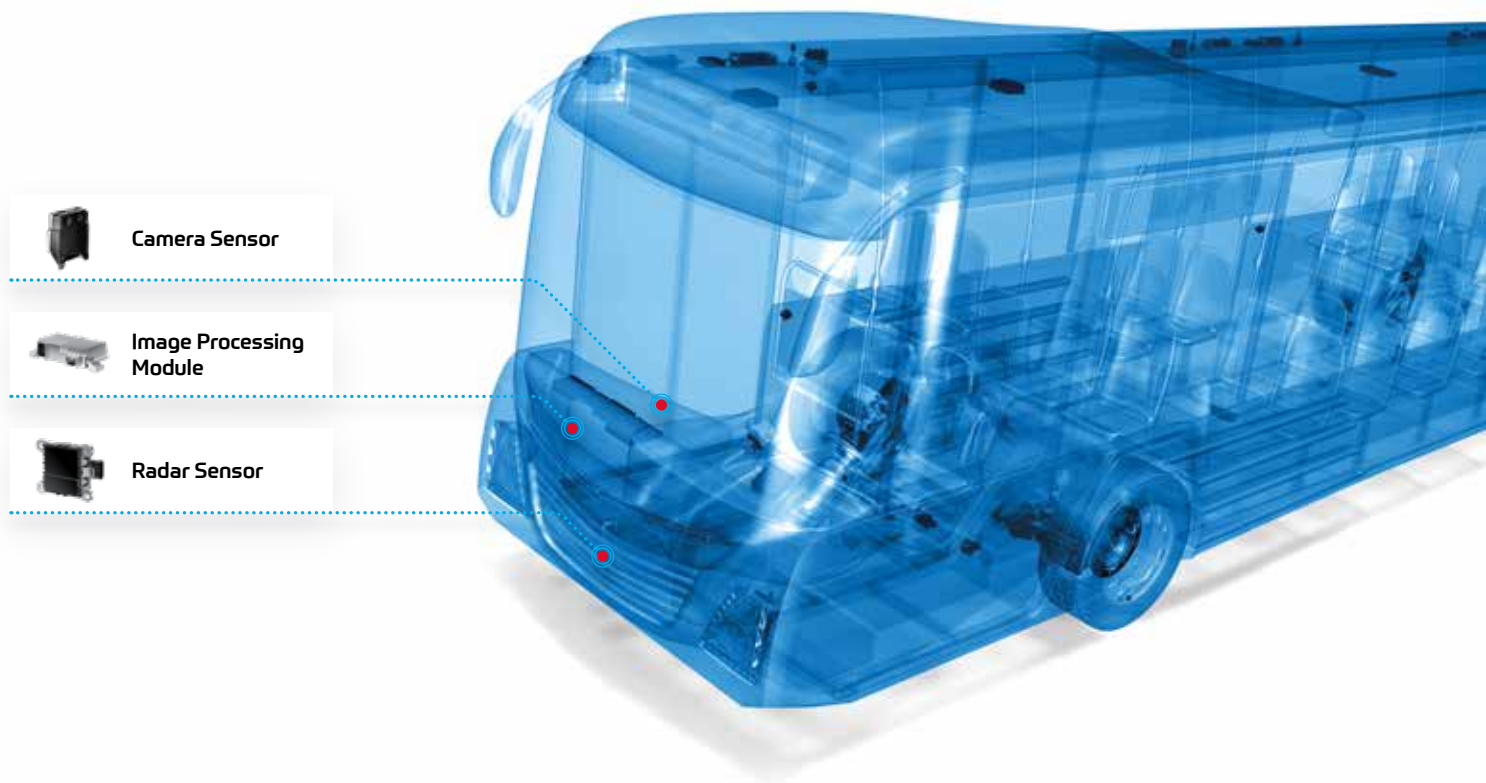
# ZF's Pioneering Collision Mitigation System for City Buses

The industry's first OE-independent Collision Mitigation System (CMS) solution specifically engineered for city buses operated in complex urban environments serves the increasing safety demands of the public transport sector. The system can actively respond to vehicles, bicyclists, and pedestrians in or entering the vehicle path to help avoid or mitigate impending collisions, while protecting unsecured bus passengers.

## Value to Customers

- Enables adding CMS functionality to city bus applications
- Helps to increase safety for unprotected road users as well as for passengers on the bus
- Assists city bus drivers to manage dangerous driving situations in complex urban environments
- Effectively contributes to increase safety of urban road traffic and public transport sector
- Supports OE customers to serve municipal requirements for advanced safety in urban areas





## Technical Features

- City Bus Collision Mitigation System with added support for urban vehicle speeds and complex environments
- Designed to monitor a variety of objects in or entering the vehicle path, including vehicles, bicyclists, and pedestrians
- If an impending collision is detected, the system can issue a Forward Collision Warning and automatically apply the brakes
- Builds on OnGuardMAX system, offering a performance tailored to city bus applications
- Data integration of state-of-the-art camera and radar enables advanced object classification and sophisticated situational analysis
- Equipped with an integrated Event Data Recorder enabling critical event analysis
- Offers additional optional functionalities such as High Beam Assist, Lane Data, and Traffic Sign Interface
- Applicable to electric and internal combustion engine city buses

## The ZF Difference

- Industry's first OE-independent Collision Mitigation System specifically engineered for city bus applications
- Active braking cascade designed to focus on the collision threat in front of the bus, while also protecting potentially unsecured bus passengers at the same time
- Algorithm benefits from ZF's extensive on-road experience to optimally perform in complex traffic situations of urban environments

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## About Us

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 165,000 employees worldwide, ZF reported sales of €43.8 billion in fiscal 2022. The company operates 168 production locations in 32 countries.

ZF's Commercial Vehicle Solutions (CVS) division is helping shape the future of commercial transportation ecosystems. Our mission is to be the preferred global technology partner to the commercial vehicle industry. Powerfully combining ZF's commercial vehicle systems expertise, extensive technology portfolio and global operations, the division serves the full commercial vehicle industry value chain. As the automotive industry progresses towards an increasingly autonomous, connected, and electrified (ACE) future, ZF's CVS division innovates, integrates and supplies components and advanced control systems that help make commercial vehicles and fleets operate more safely and sustainably. CVS unites ZF's former Commercial Vehicle Technology and Commercial Vehicle Control Systems divisions, the latter being formed following ZF's acquisition of WABCO in Spring 2020.