

CO₂-free city buses



(Source: Bosch)

European cities are increasingly turning to climate-friendly solutions for their local public transportation. At the Mobility Move trade fair in Berlin, Bosch presented the fuel-cell power module (FCPM) C100, which is particularly suitable for city buses. With this climate-neutral solution, the vehicles can be powered electrically and – when using renewable hydrogen – completely CO₂-free. The power module provides CAN connectivity to be linked to other ECUs (electronic control units). The CAN interface is also used for diagnostic purposes.

“In addition to battery-electric buses, fuel-cell electric vehicles can also be used to combat climate change,” said Jan-Oliver Roehrl, executive vice president of the Bosch Power Solutions division and chairman of Bosch’s global commercial vehicle activities. “The fuel cell is especially well-suited for buses that travel longer distances every day and rarely have the opportunity to charge en route.” An EU regulation stipulates that by 2030, carbon emissions of newly registered city buses must be reduced by 90 percent compared to 2019. Starting in 2040, this will apply to all other bus types as well. The EU recognizes vehicles with fuel-cell power modules as zero-emission vehicles.

The C100 module covers a power spectrum of 100 kW to 300 kW. With its flat design and a height of 40 cm, the module is made for being mounted on the vehicle roof. It is designed for city buses with a length of 12 m to 18 m.

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Air-conditioning system for light commercial vehicles



The thermal technology expert Webasto (Germany) developed the electric Cool Top 120-e air-conditioning system for light commercial vehicles with electric drives. The already available system delivers up to 12 kW of cooling power and is suitable for electric vehicles with a 400-V_{DC} power supply, like minibuses, light commercial vehicles and ambulances. The system operates with voltages between 250 V_{DC} and 460 V_{DC}, measures 1605 mm x 1290 mm x 300 mm, and weighs ca. 80 kg. It uses R1234yf as a refrigerant, which contributes to the system's environmental friendliness thanks to its low global warming potential (GWP). The system is delivered pre-filled.

Cool Top 120-e cools the vehicle, both when stationary and while driving. Once the target temperature has been reached, the variable speed control of the compressor automatically adjusts the output to the cooling demand. The system then operates at partial load, making it very quiet. A fresh-air function provides additional comfort in the vehicle when required.

The roof-mounted system can be integrated into existing vehicle systems via a CAN interface or controlled via an optional Webasto control unit. Thanks to its plug-and-play design, installation and commissioning are quick and easy. The housing of the rooftop air-conditioning system can be painted in the color of the vehicle. Air outlets and ducts can be individually specified.

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30 years CAN in Actros trucks

In the anniversary year “130 Years of Trucks,” Mercedes-Benz Trucks looks back on 30 years of the Actros. Since its market launch in 1996, the Actros has represented the transition from a classic commercial vehicle to an advanced, electronically networked work tool. “The Actros marks a technological turning point in the history of trucks. Many systems that are taken for granted today were introduced to heavy long-haul transport here for the first time,” said Rainer Mueller-Finkeldei, Head of Product Engineering at Mercedes-Benz Trucks. Already the first Actros generation provided electronically controlled disc brakes on all axles, and introduced CAN-based in-vehicle networks. Subsequent generations were expanded by CAN-based driver assistance systems such as adaptive cruise control (ACC), emergency braking functions, and advanced automated transmissions. Well over 1,5 million vehicles have been sold to date.



Recently, the German manufacturer put all Actros generations on the road together – from the very first Actros to the eActros 600 electric-powered truck (Source: Mercedes-Benz Trucks)

A key milestone in safety development is Active Brake Assist (ABA). The system debuted in 2006. Since its introduction, ABA has been further developed and is regarded as a pioneer of active safety assistance systems in heavy-duty trucks. From the earliest emergency braking functions to current generations with extended sensor technology, the system has shaped the path toward greater active safety on the road, stated the German heavy-duty vehicle manufacturer.

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