

## **Integration of sensors in the roof: Webasto and Bosch present prototype for autonomous driving**

**Webasto and Bosch are for the first time showing their jointly developed prototype in the field of autonomous vehicle sensor integration.**

**Stockdorf – July 4, 2022** – Innovation, collaboration and inspiration brought together in one car: Webasto has integrated a total of 25 sensors from Bosch, together with multiple additional functions, into the roof of a joint technology demonstrator. The vehicle will be unveiled to the public for the first time at Plug and Play's EXPO2022 "Startup Autobahn" innovation platform on July 7 in Stuttgart.

Four radar sensors, four lidar sensors and 16 cameras of various types from Bosch are integrated into the Roof Sensor Module (RSM) from Webasto. The sensors reliably monitor the vehicle's surroundings with the aim of enabling level 4 autonomous driving in future. In order to ensure functionality under all weather conditions, Webasto integrates cleaning, de-icing, anti-fog and sensor cooling functions, among others. Furthermore, a Bosch vehicle motion and position sensor (VMPS), which uses Safe GNSS receivers (for navigation satellite data) and accelerometers (inertial sensors) to determine absolute and relative vehicle positioning.

"Our prototypes allow us to demonstrate our systems integration expertise. In comparison with robotaxi prototypes currently on the market, we are able to significantly reduce height and weight with an elegant roof module while integrating a transparent sunroof that brings comfort with air and light into the vehicle for passengers," explains Freddy Geeraerds, member of the Management Board of Webasto SE and responsible for the global roof business.

### **Reliable monitoring of the surroundings**

Creating an accurate picture of the surroundings requires an optimal sensor set combination. Radar sensors are important for measuring distances, speeds and contours, especially in bad weather conditions. Lidar provides a highly accurate three-dimensional picture of the surroundings and objects, while also detecting motions and measuring speeds. The use of different cameras enables not only distance, surroundings and objects to be detected and classified, but also facilitates the recognition of road markings, signs and traffic lights.

### **Elegant and versatile solutions**

Webasto combines and integrates the desired type and number of sensors into the Roof Sensor Module. This allows Webasto to achieve large-scale automotive industrialization, thereby offering its customers elegant solutions for automated (level 2) to fully autonomous driving (level 4). Openable roof systems, solar technology, ambient lighting and switchable glazing are examples of features that can be added to maximize customer benefits and comfort.

"Autonomous driving is developing rapidly and the roof is the optimal position from which to monitor the surroundings. Some technical solutions already exist – however, in addition to our RSM reliably and safely monitoring the surroundings, it also integrates stylishly into the vehicle design," explains Geeraerds. "There is a great deal of customer interest and we are excited to our future projects."

**About Webasto:**

The Webasto Group is a global innovative systems partner to the mobility sector and is among the top 100 suppliers to the automotive industry worldwide. The company's product portfolio comprises in-house developed roof systems, heating and cooling systems for various types of vehicle, batteries and charging solutions for hybrid and electric vehicles, as well as complementary services relating to thermo management and electromobility. Webasto's customers include manufacturers of passenger cars, commercial vehicles and boats as well as dealers and end customers. In 2021, the company generated sales of 3.7 billion euros and employed some 15,700 people at more than 50 locations. The headquarters of the company founded in 1901 is located in Stockdorf near Munich, Germany. For more information, go to [www.webasto-group.com](http://www.webasto-group.com)

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