



Bosch digital process halves the time taken to set up calibration devices for driver assistance systems

New module for the Bosch DAS 3000 for recalibration of lateral and rear radar sensors.

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- ▶ ADAS One Solution software makes vehicle preconditioning and the precise positioning of calibration boards around the vehicle easier and faster
- ▶ Special image-processing algorithms in the camera-based software ensure the exact positioning of the target
- ▶ New module aids servicing work and recalibration of lane-change and crossing assist functions

Plochingen, Germany – When servicing and repairing modern passenger cars, workshops are ever more frequently having to readjust the camera systems and sensors of various driver assistance systems. For this purpose, Bosch has developed the DAS 3000 calibration and adjustment device, which allows assistance systems to be precisely calibrated in several steps. The most time-consuming process is target positioning, where the calibration device is precisely and correctly aligned with the vehicle in accordance with the manufacturer's specifications. The DAS 3000 now features ADAS One Solution, a new software that reduces the time taken for this by more than 50 percent compared with conventional measurement methods using a tape measure or laser. In addition, the user interface has been further improved, so that both experienced users and novices can navigate complex calibration processes without any difficulty. For workshops, this means a significant gain in quality, time, and efficiency.

Simple calibration process thanks to Bosch calibration systems

The integrated cameras in the Bosch calibration device are aligned with reference points and boards on the vehicle. Once the vehicle type has been selected, Bosch's workshop software, Esitronic 2.0 online, which is connected with the positioning software, indicates which driver assistance systems and sensors are installed in the vehicle. The workflows and settings for the calibration process of each individual sensor are stored in the software. Once the sensor to

be adjusted has been selected, the first step is to precondition the vehicle. Following that, a switch is made to the ADAS One Solution application, which is embedded in the Esitronic wizard. Using the vehicle and control-unit information gathered by Esitronic, the specific values for setting up the calibration board are also generated. The positioning software then guides users through the calibration board setup process, with graphic animations showing them exactly the target and actual positions of the calibration boards to the front, rear, and sides of the vehicle. In addition, it digitally visualizes values such as distance, yaw angle, and lateral displacement. To do so, the ADAS One Solution software uses special image-processing algorithms and sensor-specific program sequences. Finally, a report can be generated documenting that calibration has been carried out correctly. One new feature of the ESI diagnosis protocol is that it now also contains details about the position of the calibration boards. This means that there is now complete documentation for repair workflows such as “windshield replacement.” In addition, a new calibration board makes it possible to adjust the especially precise lidar sensors that are becoming increasingly prevalent. For the calibration of rear and 360-degree surround cameras, Bosch vehicle-specific calibration floor mats are also available.

Module for calibration and performance check of lateral and rear radar

For the calibration and performance check of lateral and rear radar, the Bosch range of accessories for the DAS 3000 now also includes the CTA 105-01 Doppler simulator module. In the workshop environment, it is often difficult to calibrate radar sensors, as the object free space available is rarely sufficient. This can mean that not only the calibration module is detected, but also other interfering and static objects such as lifting platforms, tool trolleys, and other vehicles. This is where the Doppler simulator module can help. A quick coupling is used to attach the module to the DAS 3000’s measuring bar. Here again, the positioning software helps the user position it exactly.

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