

Description

The manufacturing and assembly tolerances in vehicle production increasingly require calibration in relation to the dynamic driving axis, especially for driver assistance systems (DAS). VisiCon offers a wide range of individual calibration solutions for all common DAS.



The head-up display (HUD) visualizes important information in the driver's field of view by projecting them directly onto the windshield.

The readability of that information is only ensured with a correct optical calibration. For this, a digital camera is placed into the vehicle interior at the height of the driver's head with the help of a collaborative robot. This camera captures images of a specific calibration pattern, which is projected onto the windshield from different, defined positions. The evaluation of the camera images regarding distortion, blend, rotation etc. and the respective calibration is done with a special software.

Benefits for our customers

- Operator-independent, cycle time-optimized test sequence
- Modular system, individual selection of the camera depending on the requirements of the HUD system
- Collaborative robot without protective housing for camera positioning
- Combination with headlight and/or DAS adjustment possible

The use of collaborative robots enables the exact, reproducible and at the same time noiseless positioning of the camera in the vehicle interior. Due to the flexible programmability, the robot can be used for almost every vehicle model. After successful risk assessment, the application is also possible without a protective housing.

The HUD calibration can be done in combination with the adjustment of other

driver assistance systems or with the headlight adjustment to further optimize the cycle time.

Technical data

	Features, functions etc.
Collaborative robot	Lightweight robot UR10
Positioning accuracy	±2 mm
Repeatability	±0,1 mm
Degrees of freedom	6 rotating joints
Joint range	±360° for all joints
Range	1300 mm
Camera	Depending on the type of use
Testing time	Approx. 4 minutes
Power supply	230 V protective contact or 24 V DC
Communication	ProfiNet
Protection type according to DIN EN 60529	IP 54
Ambient temperature	0°C-45°C

Components



Centralizer: For correct and reproducible positioning of the vehicle along the axis of symmetry.



dPP 3D probe with illumination unit: Height measurement

HUD target: Camera calibration

Calibration software (process control)