

we invent solutions

we develop customized solutions from idea to production and beyond.

## Project details: Headlight adjustment device with 2 camera systems and touch operation

### Industries

- Automotive, Testing and Measuring Technology

### Technology fields

- Measurement, Control and Regulation Technology; Software Development, Image Processing, CAE, Optical Measuring Systems

### Project requirements

- The aim of the project was the development of an electronic measurement system for measuring and evaluating headlights for vehicles (cars, trucks, motorcycle) in test centers and workshops as well as for quality assurance of the headlights with the vehicle manufacturers. Requirement was also the possibility of data storage as well as the output of archived measurement protocols.
- This project was realized with our partner MAHA Maschinenbau Haldenwang GmbH & Co.KG.

### Facts / Highlights

- Battery mode, Battery Charger Integrated
- 7 inch TFT display with touch screen
- Camera-based headlight measurement
- 600MHz CPU for fast image processing
- Connection of USB devices, Bluetooth and Wi-Fi
- Tilt sensor to compensate unevennesses at the measuring station
- Wireless software update for new headlight systems
- Custom operating system based on Android / Linux
- Drivers and software(=app) development
- Automatic measurement of the headlight height via optical distance sensor
- Interfaces for PC connection, a printer or an automatic driving system
- Radio (Bluetooth, WLAN) and LAN connectivity

### Services of KNESTEL

- Project planning, development software and hardware as well as the image processing, EMC testing, prototyping

### Possible applications

- Customized systems with touch input
- Mobile, battery-powered devices of all kinds
- MSR and bus nodes with touchable user interface
- Man-machine interface with measurement and monitoring function

