

Autonomous Vehicle Services

Accelerating the development and
deployment of autonomous vehicle programs



The autonomous vehicle (AV) revolution promises not only safer and more efficient roadways but also a complete transformation of how we live, work and play. In addition to massive production software expertise and computational prowess, OEMs and Tier 1 manufacturers require advanced technology solutions that can support the development of innovative autonomous vehicle use cases and business models.

Automotive companies require technology solutions that can continuously evolve and assist them in remaining innovative and competitive in the autonomous vehicle market.

Driving into the autonomous future

With over two decades of experience in the automotive industry, HCLTech has been powering safety technologies in over a million vehicles globally. Our technology solutions help automotive OEMs and suppliers accelerate the development and deployment of technologies for autonomous vehicles.

20+ Years of ADAS product engineering experience

5 Global OEMs as end customers

6 Top Tier-1s as customers

35+ Product lines supported



Our service offerings

Designed to offer end-to-end services from concept to production to sustenance support for ADAS / Autonomous programs, our offerings combine HCLTech's over two decades of experience in ADAS, next-generation technologies, solution accelerators and cross-functional expertise to help automotive companies bring innovative solutions and products to the market faster.



Software Development

- Sensor perception software
- Control intelligence software
- Localization and mapping



HW and Mechanical Engineering

- PCB Design & Development
- WCCA & DFMEA
- FPGA Design
- SI, PI, PV & DV
- ATE Development
- Prototype development
- CAD, CAE, Casing Design.
- AI & ML Enabled Testing via CADify



Annotation and Testing

- Data annotation - 2D/3D, Semantic segmentation
- KPI Validation
- Simulation testing in HiL farm
- System Integration & Validation testing
- SIL & HiL Testing
- vECU validation testing
- Test automation - TestSphere



Functional Safety Compliance

- Concept & system level development
- Software & hardware level development
- Verification & Validation
- Safety planning, safety case and confirmation measures
- SEooC development
- Support processes including tool evaluation and qualification



Data Analytics

- Data analysis
- Data replay
- Failure detection
- Anonymization
- Anomaly detection
- Trend analysis
- Adaptive archiving

Our investments and innovations

Driver monitoring

Front camera

Rear camera

Front stereo vision

Lane departure control



Driver authorization

Traffic sign recognition

Surround view system

Video annotation automation

Drivable path selection

Automated trailer angle detection

Pedestrian detection

Blind spot detection

Face detection

Automatic high beam controller

Blockage detection for camera



Autonomous center of excellence

Diverse and experienced multi-disciplinary talent covering software, hardware, mechanical and testing



Next-generation lab and testing infrastructure

- HIL lab
- AI Tech Lab
- EMI/EMC lab
- Industrial design lab

Customer success stories

HCLTech has partnered with leading automotive companies around the world in implementing multiple ADAS programs to improve their time to market, quality and productivity.



Facilitated level-3 autonomous functionality with stereo vision systems for European tier-1 supplier



Development and testing of software for ADAS systems for global OEM



Modeling and testing of ADAS feature in visual simulation for US-based OEM



Verification and validation of ADAS features for global OEM



Enhancement of production and testing-ready Autonomous Vehicle Software compliant with European regulations for European OEM



Development and testing of ADAS Automation tool for global OEM

Discover how you can supercharge the future of mobility with HCLTech.
For more information, write to: AUTO_BSG@hcltech.com

HCLTech is a global technology company, home to more than 220,000 people across 60 countries, delivering industry-leading capabilities centered around digital, engineering, cloud and AI, powered by a broad portfolio of technology services and products. We work with clients across all major verticals, providing industry solutions for Financial Services, Manufacturing, Life Sciences and Healthcare, Technology and Services, Telecom and Media, Retail and CPG, and Public Services. Consolidated revenues as of 12 months ending December 2024 totaled \$13.8 billion. To learn how we can supercharge progress for you, visit hcltech.com.

hcltech.com

