e-Mobility

Driving the digital transformation of green transportation.

The electric vehicle (EV) industry is on a fast track, fuelled by sustainability concerns and government incentives. Rapid advancements in battery technology, charging infrastructure, and car-to-infrastructure communication have contributed to this explosive growth.

The software sits at the heart of this transformation, critically optimizing performance, range, and safety for EVs. It enhances battery usage for extended range and efficient power delivery, enables seamless integration of ADAS (Advanced Driver Assistance System) features and real-time data processing for a safer driving experience, and facilitates vehicle-to-grid (V2G) communication for smarter energy management.

How Acsia Can Help?

Software Design & Development

Knowledge across consulting, design, and development with various AUTOSAR stacks and micro-controllers.

Consulting Services

- Impact Assessment
- Adoption Framework

Platform Services

Leverage wide experience in various Classic AUTOSAR platforms and automotive micro-controllers for efficient EV development.

- MCAL/CDD Development
- Standard Development
- Standardization of Existing CDDs for AUTOSAR
- Porting, Migration, Configuration, and Support
- Classic AUTOSAR Stack Vendors: Vector Informatik (DaVinci Configurator Pro/DaVinci Developer), Elektrobit (tresos Studio), AVIN Systems, Dassault Systèmes (AUTOSAR Builder)
- Micro-controllers: Renesas, Infineon, NXP, ST, and Cypress

Application Services

Portable application component development.

- Custom SWC development
- Model-Based Design & Development

Integration, Verification & Validation Services

Expertise in establishing continuous integration pipelines, test automation infrastructure, undertaking software to EV level testing, and SIL/MIL/HIL simulation and testing.

Integration Services

- SWC (Software Component) + BSW (Basic Software) + MCAL (Micro-Controller Abstraction Layer)
- Continuous Integration
- Automated Integration Testing

Verification & Validation

- Acceptance Testing Framework
- Test Automation
- Specific Testing (OEM/Tier-I)

Functional Safety (FuSa) & Cybersecurity Software Solutions

Proven competence in ensuring strict adherence to industry accepted standards.

Develop FuSa designs and work products for EVs adhering to ISO 26262 and Automotive SPICE® L2.

Develop robust security design, implement software requirements and undertake testing to protect connected EVs from cyber threats.

Cloud Services

Suite of cloud-enabled automotive industry-specific services.

Seamless Over-the-Air (OTA) Updates

Enable secure OTA software updates for continuous improvement of EV functionality.

Connected EV Solutions

Facilitate seamless car-to-infrastructure (V2X) communication and cloud integration for enhanced safety and traffic management.

XACT Charge Pro

A white labelled SaaS product for smart EV charging station management.

Why Acsia?

Deep e-Mobility Expertise

A proven track record in developing ECU software solutions for EVs across battery management units, power conversion units (PCU), and onboard charger.

AUTOSAR and Functional Safety Certifications

Expertise in AUTOSAR, ISO 26262, and ASPICE ensures compliance, reliability, and safety-critical software development for EVs.

Strong Tier-I Relationships

Proven experience working with Vector Informatik (DaVinci Configurator Pro/DaVinci Developer), Elektrobit, AVIN Systems, and Dassault Systèmes.

MCAL Services

Deep expertise working on automotive micro-controllers and SoCs developed by Renesas, Infineon, NXP, ST, and Cypress.

OTA Update Solutions

Expertise in secure OTA updates allows for continuous improvement of EV software, bug fixes, and feature rollouts, enhancing customer experience and vehicle longevity.

BMS Development

Advanced BMS software development ensures efficient battery utilization, maximizes range, and provides accurate diagnostics for improved battery health.

Cybersecurity Expertise

A strong understanding of cybersecurity is crucial for protecting connected EVs from potential hacking threats.

State-of-the-art Labs

Intensive investments in world-class labs to support OEM and Tier-I production programs.

Accelerators

Best practices and accelerators curated from multiple programs providing battery models, BMS software and hardware reference designs, battery twins, and modular, scalable solutions.

What's In It For You

Accelerated Time-to-Market

Leverage Acsia's expertise in AUTOSAR, ECU development, and pre-built EV software components to bring your EVs to market faster.

Optimized Performance & Range

Benefit from Acsia's expertise in battery management software and MCAL development services to ensure optimum battery utilization and powertrain performance, and maximize EV range.

Reduced Development Costs and Risks

Acsia's optimized processes, global talent pool, and deep understanding of EV software challenges can significantly reduce costs and mitigate development risks.

Future-proofed Software Architecture

Stay ahead of the curve with Acsia's commitment to AUTOSAR compliance and secure Over-the-Air (OTA) updates, allowing your EVs to adapt to evolving technologies and customer needs.

Enhanced Safety & Regulatory Compliance

Acsia's expertise allows you to combine e-mobility solutions with ADAS, fostering a safer and more comfortable driving experience, and ensuring compliance with FuSa standards.

Scalable & Agile Development

Utilize Acsia's agile methodologies and global delivery model to scale your e-mobility software development efficiently, adapting to project complexities and evolving market demands.
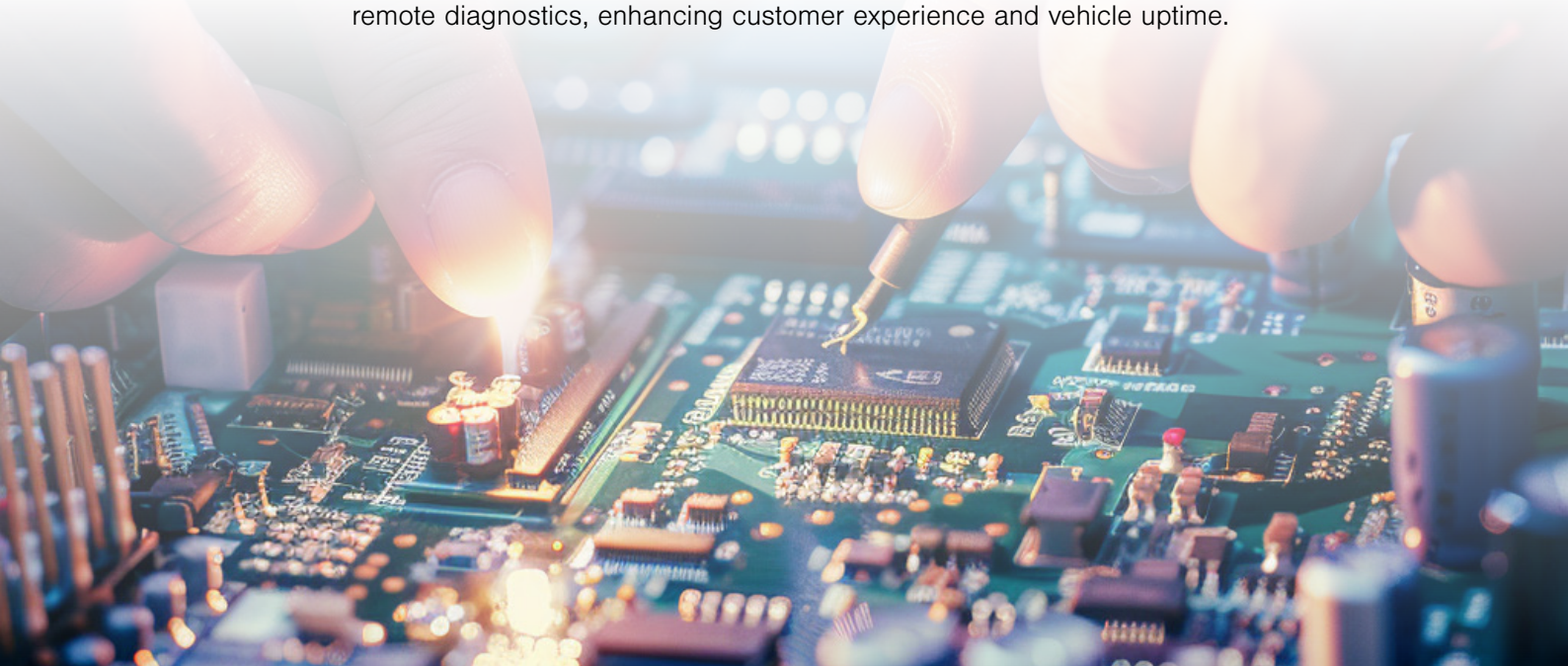
Optimized Vehicle Performance & Range

Acsia's mastery in ECU software development ensures efficient communication and management of critical EV components, leading to optimized performance and extended range.

Seamless OTA Updates & Diagnostics

Acsia's expertise in OTA updates allows for continuous improvement of EV functionality and remote diagnostics, enhancing customer experience and vehicle uptime.

SOJAN JAMES
Principal Architect
25+ years in automotive software and systems

"The global EV industry is booming driven by tech advancements, government support, and growing eco-consciousness. Acsia brings proven expertise in AUTOSAR consulting and services, ECU software development, and verification & validation. Our strong track record partnering with leading Tier-I suppliers and proven experience working on automotive microcontrollers by leading developers, position us perfectly for the evolving EV landscape."

OEM Production Program Experience

BMW | Mercedes-Benz | STELLANTIS | gm | VW | TOYOTA

Tier-I Experience

HARMAN
A SAMSUNG COMPANY

About Acsia Technologies

Acsia is a global leader in automotive software powering Digital Cockpits & Displays, e-Mobility, and Telematics. We use our expertise to develop solutions that simplify complex problems and create safer, sustainable, and more compelling driver and passenger experiences. With a presence across the United States, Germany, Sweden, Japan, and India, we collaborate with top car makers and Tier-1 suppliers.

ISO 9001 | ISO 27001 | AUTOMOTIVE SPICE® | TISAX®

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