



Acsia

Technology that drives Tomorrow

# Automotive Linux Expertise



Building secure and scalable vehicles,  
faster and cheaper.

As automotive technology continues to evolve into a key component of mainstream digital experiences, there is an opportunity to explore new ways of building software for the automobile of tomorrow. Developers and stakeholders need a more user-friendly and secure software development

framework centred around open-source principles and easily adaptable to evolving IoT standards. Automotive Linux is a viable alternative for the development of entry-to-mid-level infotainment systems. With the addition of a Safety Island, digital clusters can also be implemented with Linux.



# How Acsia Can Help?

## Linux Platform Experience

Deep expertise in ensuring robust and efficient performance across automotive systems.

### Linux Distribution

Yocto, Ubuntu, Sabaton

### HW Platforms

Qualcomm, x86, i.MX series, R-Car series, Nvidia, Telechips Dolphin series, Jacinto-4/6, Intel XScale

### Bootloaders

U-Boot, Little Kernel

### Toolchains

GNU, Yocto, LLVM

## Kernel and BSP Customization

Extensive know-how to meet specific requirements and optimize performance for diverse platforms and applications.

### Kernel configuration

### Kernel modules

### Customizing SW Stacks

## Application Development

Create user-friendly applications across various Linux-based platforms.

### Middleware

GStreamer, D-Bus, OpenGL ES, OpenVG

### Application

C/C++, Rust

### HMI

QT/QML, GTK, Kanzi

# Why Acsia?



## Deep Understanding of Automotive Linux Architecture

Experienced in building high quality and high performance Linux-based automotive products.



## Proven Linux Production Program Experience

Acsia has delivered successful programs on Linux for leading OEMs since 2014.



## Deep Domain Expertise

In-depth understanding of the automotive industry and its specific needs, regulations, and safety standards.



## Tread fast. Tread boldly. Thread safely

Deep knowhow of integrating Rust in Linux-based infotainment systems.





# What's In It For You



## Faster Innovation and Development

### Open Source Collaboration

Automotive Linux thrives on open-source principles, fostering collaboration between carmakers, tech giants, and a vast developer community. This shared effort fuels rapid innovation and feature creation, accelerating development cycles.

### Reduced Fragmentation

Traditionally, carmakers relied on proprietary software, leading to a fragmented landscape. Automotive Linux provides a common platform, allowing for standardized software across brands, simplifying development for automakers and ensuring a consistent user experience.



## Improved User Experience and Scalability

### Modern Infotainment

Automotive Linux allows carmakers to create more user-friendly infotainment systems with smartphone-like interfaces and seamless mobile device integration, enhancing the in-car experience.

### Scalability and Adaptability

The Automotive Linux platform is designed to be scalable, allowing carmakers to easily integrate new features and functionalities as connected vehicle technology and autonomous driving systems evolve.

# Introducing Sabaton

Sabaton is Acsia's Automotive Linux software platform, based on the Rust programming language for developing secure, high-performance ECUs (electronic control units) and TCUs (telematics control units). Sabaton is built on a network and data-centric architecture, with industry-standard DDS and SOME/IP as the primary mechanism of message control.

## 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 tools and platforms 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.



[www.acsiatech.com](http://www.acsiatech.com)  
[enquiry@acsiatech.com](mailto:enquiry@acsiatech.com)

