



# AUTOSAR Embedded Software

## INTELLIGENT & CYBER-PROTECTED SAFETY-CRITICAL SYSTEMS

Application of AUTOSAR for critical  
embedded software

### The Rising Challenge

●  
Safer, Secure, Modular &  
Reusable

●  
Develop a standardized SW  
Architecture for automotive ECUs

●  
Adaptive and generic  
software coding standard

### AUTOSAR

revolutionizes automotive software by abstracting code from hardware, enabling modular and adaptable architectures. It empowers developers to create scalable SW solutions, ensuring seamless integration across diverse microcontrollers.

### Why AUTOSAR ?

## THE BENEFITS

#### ■ Adaptability

Full interoperability between the different platforms and components from suppliers

#### ■ Certification acceleration

Accelerate certification of individual components for compliance with industry standard (e.g. ISO26262)

#### ■ Modularity and Reusability

AUTOSAR promotes modular architecture and reduces the development time

#### ■ Maintainability

Updating software becomes more straightforward

CS Group Canada excels in **AUTOSAR solutions**, emphasizing modularity, interoperability, layered architecture, BSW, and security. Tailoring services to ECU and automotive systems, we **accelerate development** within AUTOSAR, **optimizing costs** and accelerating your **certification** for ISO 26262 and ISO 21434 .

## Our Offer

CS Group Canada partners with **major OEMs and Tier 1**, developing autonomous and electric technologies. Our experienced engineering teams support your **AUTOSAR migration and implementation** with advanced and cost-effective techniques.

## Migration to AUTOSAR

### Code Tool Suite implementation:

Implement AUTOSAR configuration code tool suite with manual and automated processes.

### Architecture Decomposition:

Achieve HW-to-code abstraction for AUTOSAR software modularity.

### Requirement, architecture and design definition:

Define the traceability and compliance of to reach the industry standards.

## AUTOSAR Coding

Ensure maintainability, abstraction, and layering with our AUTOSAR coding services.

- Requirements definition and analysis
- Code analysis and mapping
- BSW development, configuration & integration
- MCAL & CDD development and configuration
- Integration of RTOS components
- Integration of MC-ISAR packages

## AUTOSAR Implementation

Architect robust and reusable systems with our AUTOSAR architecture services.

- Comprehensive implementation of AUTOSAR Classic Methodology
- Static Analysis & Integration testing to meet AUTOSAR-referenced safety standard
- Certifications support using various testing tools
- Efficient validation through unit & integration testing
- Testing framework and tool integration for comprehensive validation
- Use of libraries provided by AUTOSAR

## Why CS Group Canada?

With 20+ years of experience with the highest and most demanding level of critical systems in the automotive industry, our engineers have crafted innovative approaches and products to accelerate the development, certification, and commercialization of automotive systems.

The largest OEMs and Tiers 1 in North America trust us with their certification programs from System development to Software design and testing. We will be working by your side to tackle your critical challenges.

