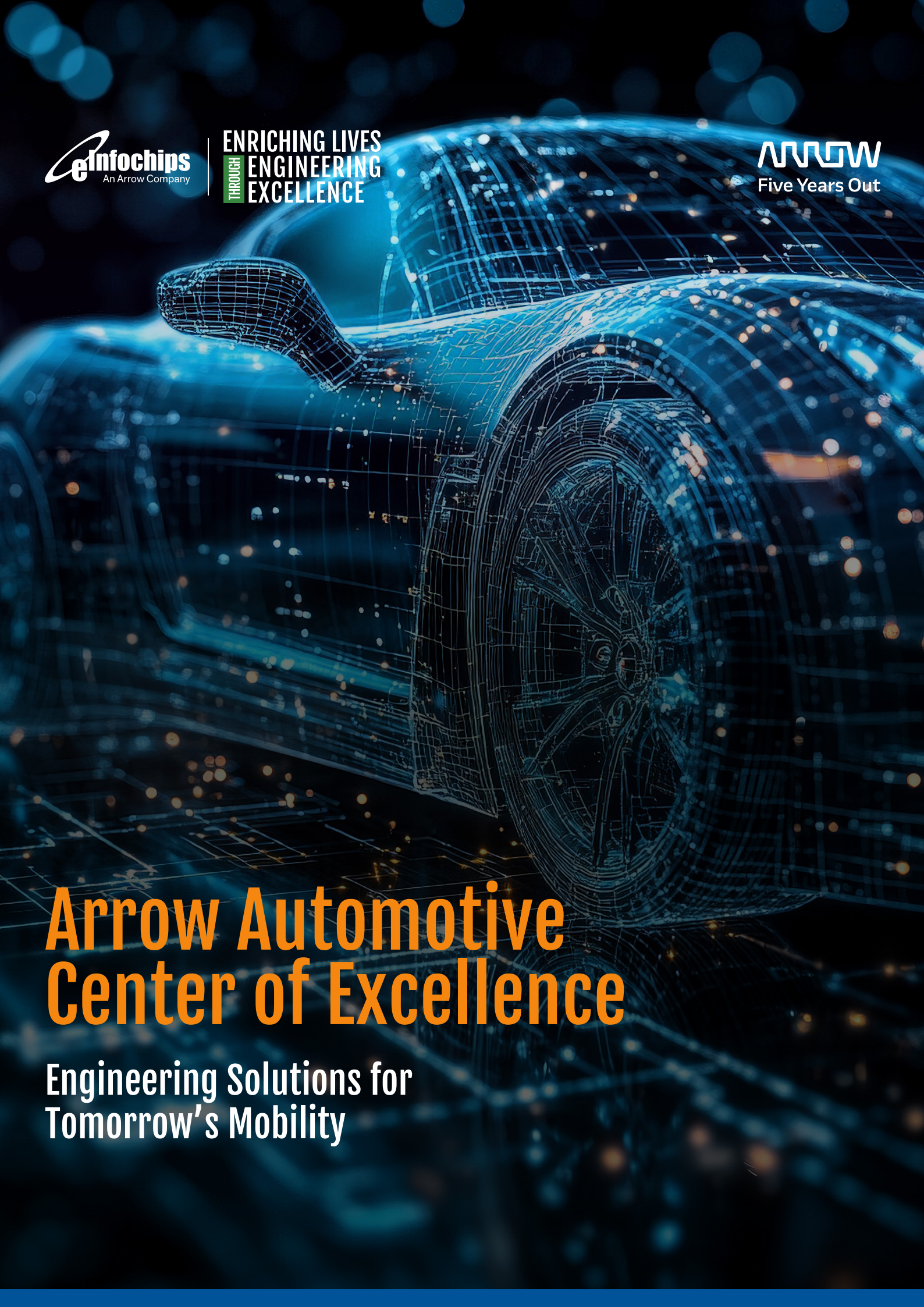

eInfochips
An Arrow Company
ENRICHING LIVES
THROUGH ENGINEERING
EXCELLENCE
Five Years Out
Arrow Automotive
Center of Excellence
Engineering Solutions for
Tomorrow's Mobility

The automotive industry is witnessing radical transformation with e-mobility, autonomous driving and connectivity becoming key enablers for software-defined vehicles (SDV). New-generation mobility solutions, with high-performance computing and service-oriented architecture, present new opportunities while also posing challenges of hardware-software integration, security and stringent regulatory requirements.

The Arrow Automotive CoE has been a partner of choice for leading OEMs & Suppliers in the development of next-gen mobility solutions. With in-depth chip-to-cloud engineering experience, strategic partnerships and a global presence, Arrow is assisting customers in overcoming the complexities of product design and compliance with functional safety & cybersecurity requirements.

With enhanced capabilities and the expert team of Automotive engineers from eInfochips, Avelabs and iQmine, the Arrow Automotive CoE enables innovators to drive the next wave of mobility.

Key Areas of Engagement

eInfochips

ADAS & Autonomous Driving

- Platform Software and SDK Porting & Optimization
- Sensor Experience (Camera, Radar, Lidar)
- Sensor Vendor OS Integration
- Sensor Driver OS Development
- Video & Image Processing
- AI-enabled Data Annotation

eInfochips iQmine

Connected Cockpits

- In-Vehicle Infotainment System
- Instrumentation Clusters
- OTA Platform (Edge/Digital)
- Telematics, Fleet Management
- In-Car Multimedia (Audio & Video)

eInfochips

Electrification

- Battery Management Systems (BMS)
- High Voltage DC/DC Converters
- Inverters and On-board Chargers

eInfochips

ASIC & Chip Design Capabilities

- 25+ Years of Silicon Design Experience
- Enabled 400+ Tape-outs across 180nm to 3nm
- ASIC, FPGA, SoC Design & Development
- Design Verification & Pre/Post-Silicon Validation
- Physical Design & DFT

Avelabs eInfochips

Safety, Security and Standards

- Functional Safety (ISO26262)
- Automotive Cybersecurity (ISO21434)
- Model-based Development (HIL/SIL Testing)
- ASPICE Implementation and Consulting
- Automotive SPICE® Capability Level 3 Certified

Avelabs iQmine

AUTOSAR Development

- Classic & Adaptive AUTOSAR Development & Integration
- Experience in Various AUTOSAR Platforms (Vector, Elektrobit EB tresos, Siemens EDA, ETAS etc.)
- AUTOSAR Development Partner since June 2012 - Avelabs

iQmine

OTA and Vehicle Diagnostics

- On/Off Board, Remote, Over-the-Air Updates and Security
- OBD Monitoring, Error Data Handling, Homologation Documentation

Automotive Safety, Standards & Processes

Functional Safety (ISO26262)

- Functional safety compliant software development (up to ASIL D)
- HARA, functional safety life cycle management plan, safety concept & tech requirements, FMEDA, FTA, FSM plans, safety assessment
- Experience in software tools such as MATLAB Simulink, Atlassian JIRA, Ansys Medini

Classic/Adaptive AUTOSAR

- Expertise in development, integration and validation of AUTOSAR Basic Software module (BSW)
- AUTOSAR Tooling: Vector Tools, Siemens EDA, Elektrobit EB tresos Studio, ETAS etc.

ASPICE

- Automotive SPICE® Capability Level 3 Certified
- Centralized QMS system for ASPICE project execution
- Pool of ASPICE trained engineers

Automotive Cybersecurity (ISO21434)

- Chip-to-cloud cybersecurity solutions
- Secure by design (secure boot/firmware OTA)
- Secure element integration
- Active security (anomaly detection & reporting, authentication, intrusion detection), threat modelling, penetration testing

Model-based Development

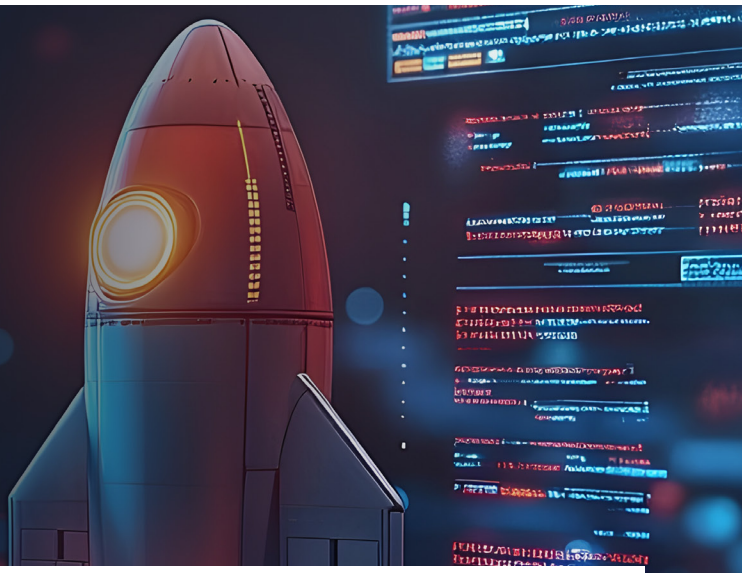
- HIL/SIL development and testing
- Control algorithm and embedded software development
- Modeling and simulation - MATLAB & Simulink
- Automation & Test - LabVIEW, Veristand

AUTOSAR · ISO 26262 · AUTOMOTIVE SPICE® · ISO 21434 · TISAX · MISRA C · CMMI LEVEL 3 · ISO 9001:2015 · VECTOR Certified Embedded Engineering Partner

Products, Accelerators & IPs

Accelerators & IPs

- DC Fast Charger Reference Design
- High-Voltage Battery Management System Reference Platform
- EV Charging Digital Platform & Smart Charging Apps
- OCPP Server/Client
- V2G ISO15118 SW Stack
- OpenADR Framework
- EV BMS HIL Testing Framework
- Reusable Camera Framework



Products

Yonohub
Cloud-based system for designing, sharing, evaluating complex systems

AutoEars
Acoustic sensing system for Autonomous Vehicles

Gaspra
Timing analysis tool with automatic configuration, code analysis, instrumentation

futes
Cover software testing needs with a minimal learning curve

Strategic Partnerships

Infineon · NXP · Qualcomm · NVIDIA · Ambarella · Analog Devices · ST · Wolfspeed · Bourns · Microsoft · aws · Taoglas

Success Stories

ADAS

Pedestrian and Object Detection Algorithm Optimization and Porting

eCockpit/Infotainment

Next-gen Infotainment System Platform Development and Testing

Battery Management Systems

High-Voltage Battery Management System Development for Electrification Applications

Power Electronics

800-400V DC-DC Converter Development with Functional Safety Compliance

EV Charging

Turnkey EV Charging Solutions Development

Telematics

Intelligent Fleet Management with Driving Behavior Analytics and Telematics Gateway Development

AUTOSAR

AUTOSAR Development, Cybersecurity Implementation and Software Development for ADAS ECUs

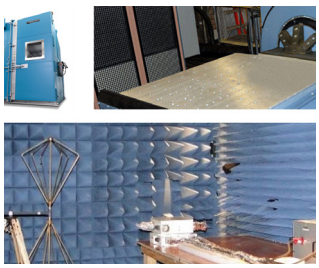
Functional Safety

Functional Safety Implementation for Steering Sensor with ASIL D Compliance and Certification from TÜV SÜD

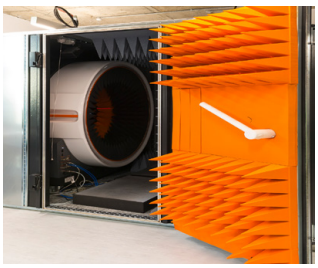
In-house Labs & Testing Infrastructure

Hardware Design Lab

Battery Management Systems Testing



High Power Testing
(Vibration, EMI, Thermal Testing)



Antenna Design & Testing Lab

Automotive CoE Presence

Why Work With Arrow Automotive CoE?

Global Footprint

Dedicated team of automotive engineers working from global design centres with a presence in major customer locations. Flexible engagement options – on-site/off-shore, turnkey delivery, time & material and custom models

Chip-to-Cloud Capabilities

Best-in-the-world hardware-software integration expertise to cater to the evolving automotive landscape – Software Defined Vehicles, Cybersecurity, Digital Cloud

Safety Critical Product Design Experience

End-to-end functional safety consulting-to-certification experience (i.e. TÜV SÜD, up to ASIL D), experienced team in the areas of Functional Safety and Cybersecurity, ASPICE L3, TISAX L2 certified

Ecosystem Partners

NXP – Battery Management Systems

Infineon – DC Fast Charger

Qualcomm/NXP – Reference Designs & EVMs

Cross Functional Expertise

Ability to leverage expertise from adjacent verticals to create cutting-edge products (e.g. World's 1st - Android-based IFE system; Android 9 based marine navigation tablet)

Products/Accelerators & IPs

OCPP client (C++/Python), OCPP 1.6J test suite, OCA certification support, DC Fast Charger reference design, Conxero EV charging digital platform, Products (Yonohub, Autohears, Gaspra, FuTes)

About eInfochips

eInfochips, an Arrow Electronics Company, is a leading provider of digital transformation and product engineering services. eInfochips accelerates time to market for its customers with its expertise in the areas of IoT, AI/ML, security, sensors, wireless, cloud, and power. eInfochips has been recognized as a leader in Engineering & R&D services by many top analysts and industry bodies, including Gartner, Zinnov, ISG, IDC, NASSCOM, and others.