

# Automotive cybersecurity services

# Protecting Road Users and Vehicle Systems Throughout the Lifecycle

Cybersecurity incidents in vehicles remain a significant concern for the safety of road users, encompassing both physical safety and data privacy. As cybersecurity is often an imperceptible quality until an incident occurs, it is crucial to address these challenges proactively.

Applus+ IDIADA offers comprehensive cybersecurity services through our dedicated team of automotive cybersecurity experts, supporting manufacturers and stakeholders worldwide in developing, validating, and maintaining their cybersecurity systems throughout the entire vehicle lifecycle.



# VEHICLE DEVELOPMENT PROJECTS

We provide support for various development activities, considering both new cybersecurity processes within organizations and specific project needs. Our approach is based on ISO/SAE 21434 and UN ECE R-155, offering:

- Development and maintenance of Cybersecurity Management Systems (CSMS)
- Cybersecurity by design: architecture, network, methods, and guidelines
- Over-the-air (OTA) security and implementation procedures
- Cybersecurity interface agreements management •
- Threat Analysis and Risk Assessment (TARA) execution •
- Cybersecurity concept and requirements definition •
- Incident response and vulnerability management



## COMPLIANCE WITH REGULATIONS AND STANDARDS

As a Technical Service (TS) designated by the Spanish Type Approval Authority (TAA), we offer:

- Homologation/certification services for UN ECE R-155 (Cybersecurity) and R-156 (Software Updates)
- Auditing and certification for compliance with ISO/SAE 21434 and ISO 24089
- · Pre-assessment activities to identify deviations and propose roadmaps for compliance
- Support in interpreting and understanding UNECE R-155 and R-156 regulations

#### **TESTING AND VALIDATION**

We employ advanced tools and methodologies for comprehensive cybersecurity evaluation:



- CyberBox tool: Our proprietary tool for assessing connectivity vectors in vehicles
- Automated penetration testing for Wi-Fi, Bluetooth, RKE, TPMS, OBDII, CAN, GPS, and USB
- Various testing techniques including signal spoofing, port scanning, RF replay, and fuzz testing
- Vulnerability scanning and continuous monitoring

## CONTINUOUS MONITORING AND IMPROVEMENT



Ongoing vulnerability management



Security patches and updates



Incident response and recovery

At IDIADA we recognize the dynamic nature of automotive cybersecurity. We offer tailored solutions through a global team of experts.

We assist our clients in establishing processes for:

We balance security with efficiency and user experience, continually adapting to emerging threats to ensure long-term vehicle and system security.

Our customized services cater to diverse clients, from major manufacturers to component suppliers, leveraging extensive experience and global reach to provide comprehensive cybersecurity support across all operational locations.

#### (i) CONTACT INFORMATION

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### CONSULTANCY AND TRAINING

To enhance understanding and build a culture of cybersecurity:



- Support in interpreting ISO/SAE 21434, ISO 24089, and other relevant standards and regulations
- Tailored training programmes and cybersecurity awareness programmes
- Consultancy services for cybersecurity strategy and implementation