AUTOMOTIVE CYBERSECURITY

TAM CERT

TRUST IS OUR STANDARD

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SERVICES

THE CYBERSECURITY ACT

The Cybersecurity Act establishes the cybersecurity certification framework for products and services. The Act introduces an EU-wide cybersecurity certification framework for ICT products, services and processes. Companies doing business within the EU will benefit from having to certify their ICT products, processes and services only once and see their certificates recognised across the European Union. The Cybersecurity Act itself is a framework, providing guidelines and information for the inferior although more detailed effort for the operation of standardization organizations. Thanks to the legislator this framework provides harmonized standards for the market.

AUTOMOTIVE INDUSTRY

The Cybersecurity Act in itself doesn't formulate any requirement directly to the market. A major cybersecurity challenge has been introduced to the automotive industry by the UNECE WP29 regulation. It is a preventive action to significant cybersecurity risks. Hackers seek to access electronic systems and data, threatening vehicle safety and consumer privacy. WP29 introduces two new UN Regulations on Cybersecurity and Software Update entered into force in January 2021, which requires four distinct disciplines to be implemented:

- Managing vehicle cyber risks
- Securing vehicles by design to mitigate risks along the value chain
- Detecting and responding to security incidents across vehicle fleet
- Providing safe and secure software updates and ensuring vehicle safety is not compromised, introducing a legal basis for so-called „Over - the - Air" (O.T.A.) updates to onboard vehicle software

The objective of UN regulations no. 155 and no. 156 is to regulate cybersecurity for automotive players, introduced by the legislation: EU 2019/2144

- **R155:** Formation and operation of Cybersecurity Management System (**CSMS**) at organizational level
- **R156:** Formation and operation of Software Update Management System (**SUMS**) at organizational level

It is the responsibility of car manufacturers to comply with legal requirements and ensure the cybersecurity of their complete supply chain. Effective in the EU from 6 July 2022 for new types and from July 2024 for all newly manufactured vehicles. (Japan and South Korea follows a similar timeline.)

This applies to passenger cars, vans, trucks and buses; Categories M and N + O if fitted with at least one ECU+ L6 and L7 also if equipped with automated driving functionalities from level 3 onwards.

OVERVIEW OF ISO/SAE 21434

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The ISO/SAE 21434 is a detailed list of requirements built into a standard in order to comply with the legal requirements of WP29. It is a description of the specific technical requirements, tasks, work products for the design and operation of the CSMS and the SUMS. 21434 is an independent certification/audit, which requires a quality management system, therefore there are overlaps with ISO 16949 and ISO 9001 compliance. The ISO/SAE 21434 standard provisions the following aspects of cybersecurity management:

- Overall | Management of cybersecurity activities
- Project dependent | Design and implementation of cybersecurity activities with responsibilities
- Continuous | Permanent cybersecurity activities (monitoring, vulnerability analysis etc.)
- Risk assessment methods | Risk assessment
- Security by design | Cybersecurity activities during design, development, manufacturing and operation phases
- Distributed | Assure cybersecurity in the supply chain (verification of suppliers)

The regulation implies that ISO/SAE 21434 certified suppliers/component manufacturers are preferred. It is the responsibility of car manufacturers to ensure that they comply with the legal requirements of WP 29. If a component manufacturer/supplier is certified, the car manufacturer can accept the conformity of the supplier and the supplied product, which is an incentive aspect for the supply chain to fulfil the cybersecurity requirements for themselves as well.

Certification:

- ISO/SAE 21434 certification independently
- Unified certification process with multiple standards
- Annual reviews per standard package

Consultancy:

- Education: Preparation, how to meet the requirements of 21434
- System design – Documentation writing and examinations required for the certification
- Security by design fulfilment - consulting on cybersecurity of products under development
- Other obligatory examinations for 21434 compliance:
- Risk analysis
- Vulnerability Testing - The standard requires periodic testing

ABOUT US

TAM CERT Magyarország Vizsgáló és Tanúsító Kft. is one of the most reliable test, inspection, certification and independent expert company. The Testing, Inspection and Certification industry is based on the demand for the conformity assessment of increasingly complex technological value creation procedures, processes, products and the persons operating them.

TAM CERT Ltd. is an official partner of the European Centre for Certification and Privacy to support the implementation of Europrivacy TM/® data protection related services.

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PRODUCT CERTIFICATION BODY