



KAIDA Special Session I



소프트웨어 중심 생태계와 자동차 사이버보안 인증

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Cybersecurity Certification in a Software-Driven World

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Key Words : Cybersecurity(사이버보안), Vehicle certification(차량인증), Software(소프트웨어), Regulation(법규), CSMS(자동차 사이버보안 관리체계), Self-certification(자기인증), Type approval(형식승인)

ABSTRACT

The evolution of vehicles from mechanical machines to software-defined systems has transformed both their functionality and their certification processes. Modern automobiles now operate as complex computer networks on wheels, demanding new regulatory frameworks to ensure cybersecurity and software integrity. Traditional type approval methods, once focused on hardware-based inspections and reproducible tests, are no longer sufficient in addressing the dynamic nature of cyber threats. To meet these new challenges, the United Nations Economic Commission for Europe (UNECE) introduced two key regulations: UN-R155 on Cybersecurity and UN-R156 on Software Updates.

Unlike traditional certification, UN-R155 emphasizes continuous cybersecurity risk management through the implementation of a Cybersecurity Management System (CSMS). This system requires organizations to monitor, identify, assess, and mitigate risks across the vehicle lifecycle. Certification under UN-R155 is audit-based rather than test-based, prioritizing on-site assessments that verify real-world processes instead of static documentation. This adaptive approach ensures that manufacturers demonstrate resilience against evolving, unpredictable cyber threats.

However, the transition poses challenges for countries such as Korea, where the regulatory framework is rooted in self-certification and fixed test procedures. Integrating dynamic cybersecurity requirements into such systems raises structural and procedural issues, particularly concerning documentation handling and audit implementation. As vehicle technologies continue to evolve, future regulations must become more agile, process-oriented, and globally harmonized. Korea's strategic path—whether toward enhanced self-certification autonomy or UNECE-aligned type approval—will determine its competitiveness in the global automotive landscape. Establishing flexible, adaptive, and audit-driven regulatory mechanisms will be crucial to maintaining both innovation and safety in an increasingly software-driven world.

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포르쉐의 어제, 오늘 그리고 미래

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Porsche in Portrait

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Key Words : Porsche(포르쉐), Product Strategy(제품전략), Product Safety(제품안전)

ABSTRACT

Since introducing its first independently developed vehicle model, the 356, in 1948, Porsche has established its brand value through distinctive design and technological innovation in the high-performance sports car market. Iconic models such as the 911 and Taycan have evolved in line with changing times, reflecting Porsche's commitment to balancing tradition with future-oriented technologies. Electrification, digitalization, and sustainability have become central pillars of the brand's product strategy, accelerating its transformation into a brand that delivers both high performance and environmental responsibility. In terms of safety, Porsche integrates high-strength body structures and advanced driver assistance systems to ensure stability at high speeds, while applying race-proven technologies to enhance real-world safety. This presentation aims to highlight the key drivers behind Porsche's sustained growth and explore its strategic direction in the future mobility landscape, grounded in the brand's core philosophy.

포르쉐는 1948년 첫 자체 제작 차량인 356을 시작으로, 고성능 스포츠카 시장에서 독창적인 디자인과 기술 혁신을 통해 브랜드 가치를 확립해왔다. 911, 타이칸 등 주요 모델은 시대의 흐름에 맞춰 진화하며, 포르쉐는 전통과 미래 기술의 균형을 추구하고 있다. 특히 전동화, 디지털화, 지속가능성은 향후 제품 전략의 핵심 축으로 자리잡고 있으며, 이를 통해 포르쉐는 고성능과 친환경을 동시에 만족시키는 브랜드로의 전환을 가속화하고 있다. 제품 안전 측면에서도 고강도 차체 구조와 운전자 보조 기술을 통해 고속 주행 시 안정성을 확보하고 있으며, 레이싱 기술의 양산차 적용은 실도로 안전성 향상에 기여하고 있다. 본 발표에서는 포르쉐의 지속적인 성장 배경과 함께, 미래 모빌리티 시장에서의 전략적 방향성과 브랜드 철학을 조명하고자 한다.

* 포르쉐코리아

무공해 상용차 로드맵 다임러 트럭의 상품 로드맵 전략

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Strategy for Zero-Emission Commercial Vehicles Daimler Truck's Product Roadmap

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Key Words : Hydrogen(수소), Fuel Cell Truck(연료전지트럭), eActros(이엑트로스), CO₂Neutrality(탄소중립), Commercial Vehicle(상용차), Procabin Safety(프로캐빈 안전기능)

ABSTRACT

Daimler Truck, the world's largest commercial vehicle manufacturer, is accelerating its transition toward CO₂-neutral transport through a dual-path strategy combining battery-electric and hydrogen fuel-cell technologies. The eActros focuses on regional and urban logistics, while the GenH2 Truck targets long-haul applications requiring high energy density. A 1,000-kilometer hydrogen test run demonstrated the maturity of this technology. However, zero-emission trucks still involve higher acquisition costs compared to diesel, emphasizing the importance of policy incentives and infrastructure development to achieve cost parity and operational efficiency. This presentation outlines Daimler Truck's product roadmap, decarbonization strategy, and advanced safety systems exceeding GSR requirements, as well as Star Truck Korea's localization initiatives for introducing sustainable transport solutions to the Korean market.

다임러 트럭은 세계 최대 상용차 제조사로서, 배터리 전기트럭과 수소연료전지 트럭을 병행하는 이중 기술 전략 (Dual-Path Strategy)을 통해 CO₂ 중립 운송 전환을 가속화하고 있다. eActros는 도시 및 단거리 물류 운송에, GenH2 트럭은 고에너지 효율이 요구되는 장거리 운송에 최적화되어 있으며, 1회 충전 1,000km 주행 실증을 통해 기술 성숙도를 입증하였다. 그러나 무공해 트럭은 여전히 디젤 대비 높은 초기비용을 지니므로, 정책적 지원과 충전·충전소 인프라 확충이 필수적이다. 본 발표는 다임러 트럭의 상품 로드맵과 탈탄소화 전략, GSR 기준의 안전 기술, 그리고 스타트럭코리아의 한국형 현지화 추진 방향을 중심으로, 지속가능한 운송체계 전환을 위한 실질적 접근 방안을 제시한다.

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