

# 5G Overview and Cybersecurity in EVs

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## Abstract

*Over the last decade, the development of electric vehicles, having different levels of autonomy, and, more in general, of autonomous cyber-physical systems is increasing tremendously. This type of system requires a telecommunication network to exchange messages and data. It is therefore important to understand the existing legislation underlying 5G and the European challenges in the Strategic Research and Innovation Agenda for Electronic Component and Systems (ECS-SRIA) regarding cyber-security. In this paper, we discuss both aforementioned issues, we illustrate the related challenges, and 5G regulation through use cases based on electric and autonomous vehicles.*

*The paper arises from a lecture the authors and Marina Settembre gave in the context of AMES Society - AEIT ( Italian Association of Electrical, Electronics, Automation, Information and Communication Technology).*

*The authors are directly involved at different levels in ECS-SRIA and, in particular, in the main challenges “Cybersecurity and Privacy” and “Safety and Resilience” in Chapters “Quality, Reliability, Safety and Cybersecurity” and “Energy”.*

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