Giesecke+Devrient

Connected vehicles and the future of mobility

Solutions from G+D help you maximize customer satisfaction

As the car increasingly becomes an extension of the consumer's digital life, fully connected with new levels of services and in-vehicle entertainment, the automotive industry is adapting to innovate first-class experiences for the consumer. Widespread embedded cellular connections are enabling new ways to inform and entertain drivers, as well as maintain the vehicles over their lifecycles.

Find out how G+D's connected car solutions can help you transform your business to meet consumer demands.

Flexible connectivity

Vehicles are an integral part of the connected lifestyle. Consumers expect personalized and flexible user experiences.

With two independent and embedded SIMs in the vehicle, this becomes reality. One eSIM is for the car's telematics (software updates, eCall, navigation etc.) and the other for the private infotainment services of the passengers – such as music and streaming.

This so-called Dual-SIM Dual-Active (DSDA) approach is important to prevent competition for data bandwidth between consumers and carmakers while ensuring seamless, reliable, and secure communication. The data provides the foundation for connected vehicles, and in the future, autonomous driving services.

- **Smart vehicles are set for tremendous growth: More than 400 million connected cars will be on the road by 2025 – a number that will grow to almost 650 million by 2030.[1]**
- **Consumers demand personal connectivity and enhanced in-car experiences: In McKinsey's 2020 Consumer Survey, about 40% of respondents are willing to switch car brands for better connectivity. Just as many want to unlock additional digital features on demand.[2]**

With our flexible eSIM and subscription management solutions, we empower you to make the best connectivity choice at any time, without the logistical task and expense of physically replacing the SIM.

1 Strategy& – The digital auto report, 2021 2 McKinsey – Unlocking the full life cycle value from connected-car data, 2020

Future-proofing

With the rise of the Internet of Things (IoT) and autonomous driving, vehicles will connect and exchange data with other vehicles, infrastructure, and consumers' personal devices.

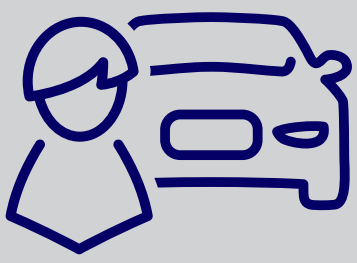
5G and ultra-reliable low-latency communications will play an important role in making this happen.

Vehicle eSIMs must be robust, secure, and function over the entire lifetime of a vehicle. In addition, they must enable years of smooth operation, be flexible to handle multiple services, and be ready to support innovation in the future.

- **A total of 41 million 5G connected cars will already be on roads by 2030, continuously making them safer and greener.[3]**
- **8 out of 10 car manufacturers trust in G+D's car solutions.**

G+D's SIMs are GSMA-compliant and guarantee future-proofed security and authentication solutions. They sustain both interoperability with next generation consumer devices and increase the length of the vehicle's life on the road. Our automotive eSIMs are 5G-ready.

3 ABI Research – 5G will shift C-V2X into high gear, 2020



New mobility, new experiences

In the new mobility, drivers will look at cars differently – from sharing cars to using them as a space to consume media, conduct work, and make calls. Owned and shared vehicles alike will need to allow flexible personalization based on user profiles.

Therefore, software and data-based services will play a significant role in future driving.

- **More than a fifth of OEMs' revenue is estimated to be based on software features and services by 2031.[4]**
- **More than 2 in 3 respondents are willing to pay for connected services; but the respective amount varies greatly between regions.[5]**

G+D connects, secures, and authenticates drivers and vehicles, enabling the market to offer personalized services, create confidence, and deliver the best user experience.

4 Capgemini – Next destination: Software, 2021 5 Strategy& – The digital auto report, 2021

Digital car key

Most new cars communicate with their drivers through remote keyless systems and smartphone apps. Connectivity makes cars road safe, but with new capabilities come new vulnerabilities, which can be exploited by hackers. Security must evolve along with connectivity if vehicles are to stay safe.

In the long run, digital keys will connect with more ecosystems and carry more functions amid the trend of smart mobility.

- **The digital key market will maintain rapid growth – it's expected to increase by USD 640 million from 2021 to 2026.[6]**
- **46% of the market's growth will originate from Europe.[6]**

G+D Digital Key® solutions are available according to the Car Connectivity Consortium (CCC) and Intelligent Car Connectivity Industry Ecosystem Alliance (ICCE) standards.

6 Technavio – Automotive Digital Key Market, 2022

Managing trusted connectivity

Giesecke+Devrient (G+D) is a global security technology group and leader in connectivity management for the IoT. In the automotive sector, our eSIM management solution is leading with 1 in 3 connected cars being enabled by G+D. We at G+D ensure that the automotive solutions of tomorrow provide secure, trusted connectivity, as well as personalized services. Data integrity and privacy have to be guaranteed end to end. Read more at www.gi-de.com

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