



IPG Automotive GmbH
Bannwaldallee 60
76185 Karlsruhe
Tel.: +49 721 98520 0
E-mail: press@ipg-automotive.com

Press release

Collaboration between IPG Automotive and Spirent for C-V2X Solutions

Efficient performance, compliance and function validation of C-V2X systems

Calabasas (California) and Karlsruhe, December 11, 2023 – Spirent Communications, expert for communications testing and assurance technology, and IPG Automotive, specialist for simulation solutions, collaborate in the field of C-V2X solutions. The companies integrated an interface between the C-V2X testing solution from Spirent and the open integration and test platform CarMaker from IPG Automotive.

Connected vehicles are able to communicate via mobile technology. They exchange information among each other, with the infrastructure of their environment and with other road users. These different ways of communication are summarized under the generic term cellular vehicle-to-everything communication (C-V2X).

Combining the C-V2X testing solution with the simulation of virtual vehicle prototypes in CarMaker enables developers to test and validate vehicle communication using real scenarios in a lab environment.

Coupling the two systems helps to minimize expensive and time-consuming field tests, while maximizing their efficiency. In the open integration and test platform CarMaker from IPG Automotive, realistic virtual scenarios can be generated in which various types of road users interact with each other. For this, the driving function under test is connected with the C-V2X solution from Spirent in the virtual vehicle prototype. The complete test automation reduces



complexity and ensures that results are reproducible even for critical time and safety requirements.

Spirent C-V2X is a sophisticated single-platform solution for testing conformance, functionality, and performance of devices and automotive systems utilizing V2X applications. It can combine multiple cellular, Controller Area Network (CAN), satellite navigation (GNSS) connectivity signals and channel modelling for automotive application, allowing developers to attribute multiple transmitters to multiple vehicles and thus simulate complex, real-world scenarios. As a consequence, reproducibility of such complex RF environments to test C-V2X technology under even the most difficult conditions is simplified. The solution's capacity to test different frequency bands and communication protocols also enables testing and validation for the interoperability of vehicles from different geographical regions.

"C-V2X plays a key role for the future of intelligent mobility", states Aniket Khosla, Vice President of Cloud and IP Product Management at Spirent. "This collaboration with IPG Automotive delivers reliable and efficient simulation models with an automated test process to speed up validation of safety critical ADAS applications."

Josef Henning, Vice President Product and Solution Management at IPG Automotive, explains: "With this solution, reproducible tests can be performed automatically using defined scenarios, which is an essential prerequisite for reliable and comparable results in the verification process. Our collaboration enables to validate the C-V2X connectivity for the different implemented functions including safety and certificate management."

2,995 characters (including spaces)

Image



Collaboration between IPG Automotive and Spirent for C-V2X solutions.
Image: IPG Automotive GmbH, Spirent

About Spirent Communications plc.

Spirent Communications is the leading global provider of automated test and assurance solutions for networks, cybersecurity and positioning. The company offers innovative products, services and managed solutions geared towards the test, assurance and automation challenges of new technologies, including 5G, SD-WAN, cloud and autonomous vehicles. www.spirent.com

About IPG Automotive GmbH

As a global leader in virtual test driving technology, IPG Automotive develops innovative simulation solutions for vehicle development. The company's software and hardware products for the application areas of autonomous vehicles, ADAS, powertrain and vehicle dynamics are designed for seamless use throughout the entire development process. www.ipg-automotive.com

Further information at www.ipg-automotive.com/en/press



Press contact

IPG Automotive GmbH

Carmen Nussbächer

Bannwaldallee 60

76185 Karlsruhe

Tel.: +49 721 98520 206

Fax: +49 721 98520 99

E-mail: press@ipg-automotive.com

Press area: www.ipg-automotive.com/en/press