

STMicroelectronics and BeonD design and deliver a more personalized and flexible driving experience

A smart seating solution based on Sabelt racing car line and powered by STMicroelectronics AutoDevKit

THE CHALLENGE

With its AutoDevKit tool set, ST has introduced a modular approach for ECU development with high component reuse. The company has released demo applications of relevant automotive use cases to prove the effectiveness and ease of implementation of such products in a real context. ST partnered with BeonD for their expertise in the development of a full-stack solution with mechanical automotive elements, customized hardware and firmware, and a simulated car environment for the functional operation of the devices.

THE SOLUTION

BeonD and ST worked together to co-design a new custom board that integrated many of the functions present in the AutoDevKit ecosystem to completely meet Sabelt seat features and include personalization enhancements. While ST provided the original schemes of the demo boards and the basic software drivers, BeonD worked on the integrated board and software application. Also, BeonD teamed up with Sabelt to produce a specific seat for the demo purpose.

IMPACT

Supported by ST, BeonD developed a customized, independent ECU fitted to a real-life high-end model seat. The ECU manages the actuators in the seat and reads its sensors. It can also be expanded to new functionalities due to a connection to the CAN bus. With remote CAN control, the physical buttons can be removed, reducing complexity and saving weight, a sought-after feature for high-end cars. The board is now the base platform for real-life projects and helps speed-up the development for customers seeking smart seat solutions without having to redesign their central control system.

BEOND

BeonD's service is focused on reaching the highest performance by developing a complete end-to-end solution: concept design, simulation, implementation, and testing.

BeonD is mainly targeting customers in the Automotive, Defense, Marine, and Off-highway industries. Their focus is on applications in business areas dealing with R&D and Innovation.



HEADQUARTERS

Italy, Grugliasco (TO)

FOUNDED

2013

NO. OF EMPLOYEES

11 – 50

WEBSITE

beond.ne

ACKNOWLEDGEMENTS

We would like to express our sincere thanks to Andrea Airale, Alessandro Ferraris (BeonD CEOs) and Alessandro Troisi (STMicroelectronics senior project manager) together with the entire AutoDevKit Team for its support.

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ABOUT STARTUP AUTOBAHN

STARTUP AUTOBAHN powered by Plug and Play is an open innovation platform that provides an interface between innovative tech companies and industry-leading corporations. The basis of the program is the partnership that develops between startups and the corporate business units. The two entities hold an equal footing from the get-go: together they evaluate the potential for a joint venture, move forward to pilot the technology, and work to achieve the ultimate goal – a successful production-ready implementation. Designed with the intention to exceed startup acceleration, STARTUP AUTOBAHN powered by Plug and Play moderates a community for collaboration with a focus on implementable results. Over the years, the platform has successfully cultivated over 400 projects with more than 300 startups since its founding in 2016.