

AURORA LABS | STMICROELECTRONICS

Edge Intelligence: AI-driven OTA Updates and Predictive Maintenance

STMicroelectronics and Aurora Labs unveil the future of AI at the edge on the Stellar SR5E1E7 32-bit Automotive MCUs.

THE CHALLENGE

Software Defined Vehicles (SDV) promise a future of continuous improvements. The challenge to enable this is that vehicles, down to the smallest microcontrollers (MCUs), need to be able to detect software errors before they cause a critical system failure. Vehicles also need the ability to update/roll back the software to ensure safe driving without interfering with the ongoing use of the vehicle.

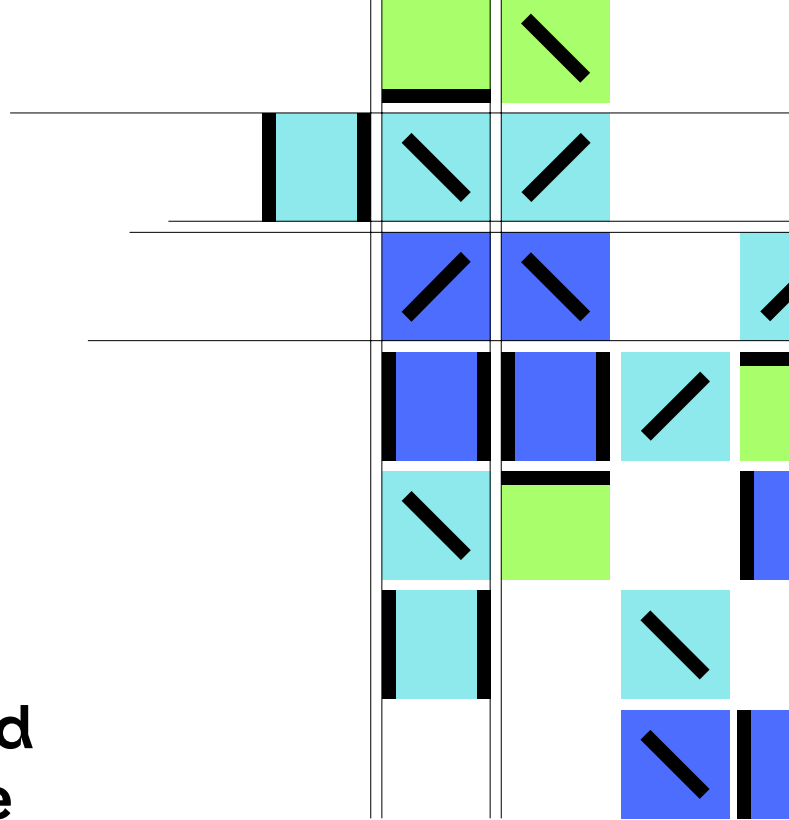
THE SOLUTION

Aurora Labs' Auto Update and Auto Detect were fine-tuned to address these challenges with STMicroelectronics' new Stellar MCUs. By harnessing AI and machine learning, Auto Detect pre-emptively identifies and mitigates potential issues before they cause critical system failure. Auto Update ensures seamless, efficient software updates and rollbacks even with single flash bank MCU memory constraints. This was achieved through close collaboration between Aurora Labs' and STMicro's business, technical, marketing, and innovation units.

THE OUTCOME

The partnership between STMicroelectronics and Aurora Labs yielded a groundbreaking solution that significantly improves vehicle safety and functionality with continuous QA and secure zero-downtime OTA updates, even on the smallest MCU. These advanced technical capabilities will enable OEMs to usher in the age of the Software Defined Vehicle (SDV), fulfilling the promise of continuous improvements throughout the vehicle's lifetime. This successful partnership opens the door for further innovation and commercialization, with plans to expand Aurora Labs' AI-driven technology across STMicroelectronics' product lines, setting new standards for continuous automotive quality.

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AURORA LABS

WEBSITE

auroralabs.com

FOUNDED

2016

HEADQUARTERS

Tel Aviv, Israel

NO. OF EMPLOYEES

50+

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.

AURORALABS

Aurora Labs' technology enhances vehicle safety and functionality with continuous QA and secure zero-downtime OTA updates.

Aurora's technology enhances microcontrollers (MCUs) with zero downtime over-the-air (OTA) updates and predictive maintenance by using AI to detect changes in the software, its behaviour, and system dependencies.

ACKNOWLEDGEMENTS

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