

## Arnold NextG, Embotech and Terberg Special Vehicles form alliance for the development of autonomous logistics systems

The first project, an autonomous yard tractor, is already in conversion.

*Based on the fully autonomous vehicle (AV) kit provided by Embotech, the multi redundant central control unit by Arnold NextG, and the yard tractors by Terberg Special Vehicles, this alliance offers the opportunity to drive autonomously on private grounds as of today.*



The fully autonomous Terberg YT193 will begin its first test deployments right after the summer 2023

Source: Embotech [Download](#)

Arnold NextG, the technology provider for multi-redundant drive-by-wire systems, Embotech, the solution provider for autonomous driving systems, and Terberg Special Vehicles, Germany's leading special vehicle supplier have formed an alliance to develop autonomous vehicles designed for logistic yards, ports and other gated area operations with mixed traffic environments.

### **Autonomous applications for mixed traffic environments**

The first joint autonomous vehicle is based on the Terberg YT193 yard tractor and is currently in production. The YT193, a benchmark in terminal operations, will be retrofitted with a multi-redundant drive-by-wire system and a fully AV-Kit. This technology will significantly enhance its operational capabilities and provide autonomous applications in mixed traffic environments.



Terberg's state-of-the-art yard tractor YT193 is robust, durable as well as easy to handle and to maintain. The YT series has been designed as a multi-functional platform to provide various propulsion methods: from diesel to electric and right up to hydrogen engines. This model range is Terberg's contribution to a clean future, reduced fuel consumption based on high-tech engine technology and more sustainable transportation.

"Terberg Special Vehicles, with its extensive industry experience, will oversee the integration process of the AV-Kit. Our team is handling the wiring and installation of the AV-Kit to ensure that all components operate in harmony", says Terberg's General Manager Arno Ortlieb.

### **Laying the foundation for driving fully automated according to ISO 26262**

Arnold NextG's central control unit provides a vehicle-independent system solution for the fail-safe control of all primary and secondary functions, as well as secured interfaces for all autonomous driving (AD) systems. As an independent advance developer, incubator and system supplier, Arnold NextG take care of the development and implementation - from vision to road approval.

"Through our employees' decades of experience in drive-by-wire technology, Arnold NextG possesses unique competence in developing and deploying add-on-solutions for all drive-by-wire requirements and applications. With our technology, we surpass current safety standards, laying the foundation for driving fully automated on public roads according to ISO 26262 (ASIL D) in the future," says Kevin Arnold, CEO of Arnold NextG.

### **Flexible human-like driving and ultra-precise maneuvering**

Embotech, the project's system architect, will provide the AV-Kit and its advanced L4 virtual driver, PRODRIVER. The AV-Kit offers redundancy for localization and perception, ensuring the highest performance under a wide range of weather conditions. PRO-DRIVER, Embotech's state-of-the-art solution to autonomous navigation, path planning, tracking, and control for autonomous or highly automated vehicles, allows for flexible human-like driving and ultra-precise maneuvering with a trailer. These features are vital for the complex mixed traffic environments typical of ports.

"This collaboration signals a major advancement in autonomous vehicle technology," says Andreas Kyratos, CEO of Embotech. "By retrofitting the YT193 with our high-tech PRODRIVER system, we can demonstrate the performance and capabilities of our technology under real-world conditions, including mixed traffic and challenging weather scenarios. Later on, we plan to integrate the AV-Kit ex factory at Terberg."

### **First test deployments right after the summer**

The fully autonomous vehicle will begin its first test deployments right after summer and demonstrate its performance in customer operations by the end of 2023.

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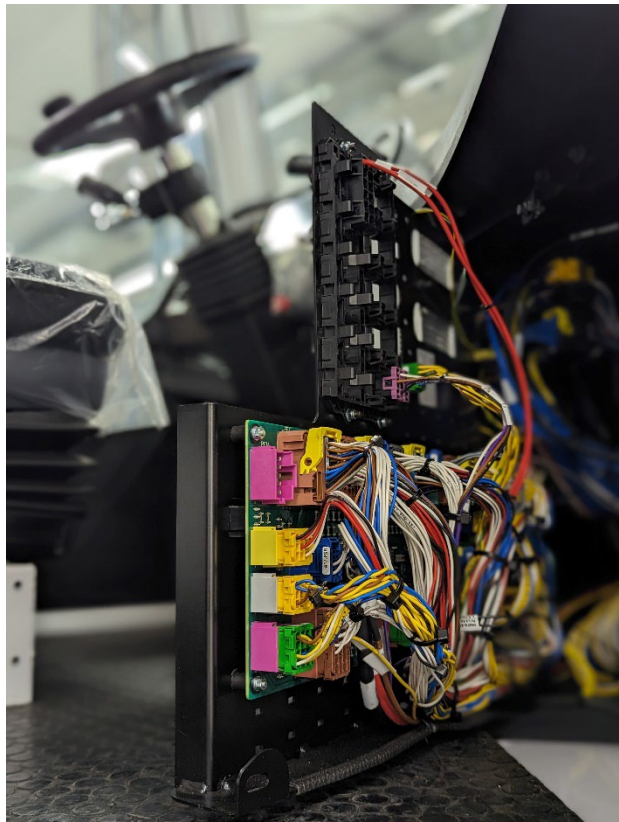
Through the joint development of autonomous logistics applications, Embotech, Arnold NextG, and Terberg Special Vehicles actively contribute to shape the future of the logistics industry. The three companies are setting an example for their joint endeavor to develop innovative autonomous vehicle solutions to significantly enhance efficiency, productivity, and safety on private grounds such as company yards and industrial sites.



*The YT193, a benchmark in terminal operations, will be retrofitted with a multi-redundant drive-by-wire system and a fully AV-Kit*

Source: Arnold NextG

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*The first joint autonomous is currently in production at the Arnold-NextG-Factory.*

Source: Arnold NextG

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Source: Arnold NextG

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## **About Arnold NextG**

Arnold NextG realizes the Safety by Wire®-Technology of tomorrow. We offer the globally unique and multi-redundant central control unit NX NextMotion, which complies with the latest regulations and enables fail-safe and individual implementation in all application areas. As an independent advance developer, incubator and system supplier, Arnold NextG takes care of planning and implementation - from vision to road approval. [www.arnoldnextg.com](http://www.arnoldnextg.com)

## **About Embotech**

Embotech is a leading solution provider of AI software for autonomous driving systems for private grounds and smart factories. With its virtual driver software PRODRIVER, Embotech provides an L4 system capable of planning and executing highly complex and dynamic maneuvers, which makes it ideal for driving around dynamic obstacles, in tight spaces and mixed traffic. The company's automation solutions bring significant improvements in safety, productivity, and energy efficiency to logistics yards, ports, mines, and smart factories. Applications include automated driving for passenger cars and commercial vehicles, energy management solutions as well as industrial robotic automation. [www.embotech.com](http://www.embotech.com)

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Embotech is a leading solution provider of AI software for autonomous driving systems for private grounds and smart factories. With its virtual driver software PRODRIVER, Embotech provides an L4 system capable of planning and executing highly complex and dynamic maneuvers, which makes it ideal for driving around dynamic obstacles, in tight spaces and mixed traffic. The company's automation solutions bring significant improvements in safety, productivity, and energy efficiency to logistics yards, ports, mines, and smart factories. Applications include automated driving for passenger cars and commercial vehicles, energy management solutions as well as industrial robotic automation. [www.embotech.com](http://www.embotech.com)