

Next Stop Asia: Arnold NextG and Macnica form technology alliance for Japan

Drive-by-Wire made in Germany meets system integration expertise from Japan – new prospects for safe, autonomous mobility

- Strategic Alliance with Vision: Arnold NextG enters the Japanese market with Macnica – CEO Kevin Arnold sees Asia as a key addition to the global technology portfolio.
- Setting a Technological Benchmark: NX NextMotion delivers certified digital vehicle control – safe, modular, and OTA-capable.
- Future-Focused Applications: Autonomous shuttles, specialty vehicles, and robotics as enablers of next-generation industrial mobility.



Arnold NextG and Macnica form technology alliance for Japan, graphic: Arnold NextG

Aichelau / Yokohama, June 3, 2025 – Arnold NextG GmbH, a provider of certified, fail-operational Drive-by-Wire technology, is expanding strategically into Japan – one of the world's leading innovation hubs for autonomous vehicle systems, especially in robotics, shuttle platforms, and system integration. By partnering with Japanese integrator Macnica, the company gains a strong implementation and scaling partner with deep local expertise.

Japan is considered a global lead market for autonomous mobility solutions – making it an ideal environment for the introduction of fail-operational control systems made in Germany. At the heart of the alliance is the joint realization of next-generation vehicle platforms based on the NX NextMotion – Safety-by-Wire™ solution, to be integrated into a wide range of autonomous systems across the Japanese market.

Future-proof control technology on a global scale

NX NextMotion is a Drive-by-Wire central control unit, certified to international safety standards, enabling full digital control of steering, braking, and propulsion – engineered for safety-critical, autonomous vehicle architectures. The platform is approved for use in development and testing vehicles on public roads in Germany, allowing for real-world validation of autonomous driving functions. This makes NX NextMotion a highly practical solution for research programs, pilot projects, and the gradual industrialization of automated vehicle platforms.

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The system features a quad-redundant safety architecture (CAN A/B, PWM, analog/digital) and complies with global standards including ISO 26262 (ASIL-D), ISO 61508 (SIL3), ISO 21434 (Cybersecurity) and the UNECE regulations for vehicle type approval. Its modular design, OTA capability, and manufacturer-agnostic integration make NX NextMotion suitable for all autonomy levels up to Level 5. Standardized interfaces ensure compatibility with leading autonomy stacks – ideal for high-automation applications with clear industrialization potential. Typical use cases include autonomous shuttle and transport systems, specialty vehicles in agriculture and construction, and mobile robotics.

Local strength for strategic market access

Macnica brings decades of experience in adapting, integrating, and scaling safety-critical electronics and software systems within the Japanese mobility ecosystem – a decisive factor for the successful market introduction of NX NextMotion. As a strategic implementation partner, Macnica supports technical localization, vehicle platform integration, and software connectivity – including integration with established tools such as the fleet management system everfleet™.

This collaboration ensures that NX NextMotion not only meets the highest technical standards, but also aligns with Japan's regulatory, infrastructural, and operational requirements – from field integration to near-production-level validation.

"Our technology forms the backbone of future mobility – fully controllable, fail-operational, and industrially scalable. With Macnica as a trusted partner, we ensure that Japan gains access to a vehicle control solution engineered for the future," says Kevin Arnold, Founder and CEO of Arnold NextG.

Arnold NextG's entry into the Japanese market marks not only a geographic expansion, but also a technological milestone in the global race for autonomous mobility. In an environment that demands precision, certification, and industrial scalability, NX NextMotion delivers a control platform that sets new benchmarks in safety, integration capability, and real-world implementation.

About Arnold NextG

Arnold NextG is redefining vehicle control with Safety-by-Wire®: The NX NextMotion central control unit offers fail-operational architecture and platform-independent integration – setting a new global standard for autonomous vehicle systems. The solution enables secure implementation of next-gen mobility concepts including full autonomy, teleoperation, and platooning, in compliance with the latest hardware, software, and functional safety standards. As an independent advanced developer, incubator, and system supplier, Arnold NextG handles the entire process – from vision to public road validation. With regulatory approval for real-world testing in Germany, NX NextMotion is shaping the global future of Drive-by-Wire. www.arnoldnextg.de

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