

BWI Group set to start EMB production in 2026, targets 'All-by-Wire' by 2035

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BEIJING, BEIJING, CHINA, July 16, 2024 /EINPresswire.com/ -- <u>BWI Group</u> announced on July 10th its "All-by-Wire 2035" global strategy: provide global customers with more smart mobility solutions, leveraging its expertise in brake-by-wire, active suspension, and intelligent systems and architectures. The group expected 95% of the chassis products delivered in 2035 will be fully controlled by wire.

As one of the latest milestones, BWI Group secured two OEM partnership on Electro-Mechanical Braking (EMB) system, and planned to be massively produced EMB for the customers in 2026.

George Chang, CEO of BWI Group, said, "BWI Group is dedicated to advancing the electrification and intelligent connectivity of the automotive industry globally, through continuous investment and promotion in the two core areas of highly automated driving and extremely comfortable smart cockpits."



George Chang, BWI Group CEO, announces the mass production of EMB system is set to start in 2026



Doug Carson, CTO of BWI Group, elaborates on the advantages of EMB

He outlined that BWI Group's brake-by-wire products, providing robust safety redundancy, will

support L4 and higher levels of automated driving technology; full active suspension products will help build multi-functional and highly comfortable smart cockpits for multiscenario. Meanwhile, automotive systems and architectures will fulfill the demands of the intelligent transportation era by building integrated hardware-software systems and centralized electronic-electric architectures.



Particularly in the field of brake-bywire, EMB is a key product for BWI

Group and represents a key innovation. BWI Group will complete prototype A development in 2024, establish an automated production line in 2025, and begin mass production for customers in 2026.

BWI Group's ultimate EMB technology has accumulated over 20 years of experience. Thanks to predecessor's concept validation in 2000, the group's technology has now evolved into its third generation. To meet market demands, BWI Group entered partnership with ThyssenKrupp Steering, joining forces to leverage each other's strengths and accelerate the research, development, and production of EMB.

Jiang Yongwei, BWI Group China President, said, "Our Chinese EMB R&D team is improving the performance and durability of the EMB technology to ensure a higher level, and will achieve breakthroughs in the next generation hardware and software this winter."

BWI Group's R&D centers located in the United States, Poland, Italy, and China, are in collaboration with the Shanghai Software Center, and jointly advance EMB research and development. BWI EMB underwent winter cold-weather testing in two consecutive winters in 2023 and 2024.

Leading automakers in North America, Europe and Asia have witnessed the testing and gave very positive comments and feedback about the cutting-edge technology and reliability.

BWI Group will carry comprehensive performance tests, including durability tests, adaptability tests in varied adhesion conditions, and stability tests in diverse environmental conditions, to ensure EMB's outstanding performance in various scenarios.

Doug Carson, CTO of BWI Group said: "A large amount of investment was made in our EMB research and development, testing, and production to better realize the eco-friendly, zero-drag,

and full-redundancy characteristics. Our dual-motor design boasts the solid R&D which started very early and stands out with its capability to significantly accelerate braking response."

BWI Group's EMB not only features sleek design, agile response, hardware redundancy, scalable solutions, but also utilizes a fully redundant hardware solution in all-dry format for four wheels. The BWI EMB system will soon support L4 highly automated driving and above.

Powerful, safe, and stable – BWI's EMB system integrates functions such as ABS, ESC, TCS, ACC, and advanced diagnostic capabilities to ensure safety and reliability. The dual-motor EMB system can significantly accelerate its response speed, while the four-wheel independent control maximizes braking stability.

Truly wire-controlled with a simple structure – BWI's EMB system adopts a minimal architecture, eliminating servo mechanisms or ESC modules, to be truly wire-controlled. The system removed brake pipes, unified the left and right steering structures, reduced space requirements and enhanced the possibilities for lightweight and minimum designs.

Plug-and-play with optimized costs – BWI's EMB system utilizes a simplified plug-in-assembly without the need to process brake fluid. It makes a vehicle much easier to assemble in a much shorter time. The system uses fewer components to bring a more cost-effective solution for L3 to L5 highly automated driving vehicles.

Environmentally friendly – BWI's EMB system achieved zero drag by releasing the calipers instantly after braking, which effectively reduces energy consumption and emissions of carbon dioxide and particulates. The electrical signal transmission replacing brake fluid further minimizes the potential impact on the environment.

Promising EMB market prospect

Doug Carson said: "BWI's unique EMB system has two motors, ball ramp technology, integrated electric park brake, wear adjustment features, and even scalable family approach, offers a very powerful solution to our customers."

Customers in the U.S. and the Europe showed very strong interests in BWI's EMB system, and eager to discuss about the cooperation. A car maker who had postponed the EMB application, but restarted the project to discuss with BWI Group. The group also received lots of positive feed backs, such as BWI's incredibly packaged EMB is the only one fitting into its mechanical structure without any change, according to Doug Carson.

Rapidly developing Chinese automakers are actively embracing BWI Group's world leading EMB technology. Kaiyi Auto and BWI Group announced the strategic partnership to jointly develop EMB products and technological applications. New-type smart electric vehicle maker, U Power Tech, will integrate BWI Group's EMB system in super chassis products to expand technological

capabilities and fit a wider range of vehicle.

Xiong Shusheng, Professor at Zhejiang University Vehicle Research Institute, Visiting Professor at Chinese Academy of Sciences, predicted EMB market penetration rate may reach 5% in 5 years. In the next decade, it will experience explosive growth, contributing an estimated billion-dollar worth 20% share to the global brake-by-wire market valuing tens of billions dollar.

He points out that BWI Group has taken the lead in the fully dry EMB technology sector, combining the technological advantages of joint R&D between the Europe and the US with the cost advantages of China manufacturing, positioning it to capture a larger share of the EMB market in the future.

BWI Group also advocates for suppliers to work together and jointly promote the development and innovation of EMB technology, aiming to create an open and prosperous EMB technology ecosystem.

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