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Japan Mobility Show 2025

Bosch is shaping the era of software-driven mobility with its outstanding strengths in software and hardware

- ▶ By-wire brake actuator with redundancy and reliability.
- ▶ Announcement of new function providing automatic recognition of driving mode using facial recognition, and easy turn assist, from the comprehensive Vehicle Motion Management software.
- ▶ Bosch plans to start the production of the 10th generation Electronic Stability Program (ESP®) at Tochigi plant from 2026.

Yokohama, Japan – Bosch, a leading global supplier of technology and services, is introducing comprehensive solutions from hardware to software at its booth at the Japan Mobility Show 2025 with the theme of “Software-driven mobility.”

“Bosch has unparalleled expertise and experience in both software and hardware,” said Christian Mecker, president and representative director of Bosch Corporation. Bosch presents at the show a wide range of solutions, from the latest software-driven technologies to the hardware that enables them. “By fully leveraging the strengths, Bosch will continue to meet customers’ needs and shape the future of mobility,” Mecker added.

Showcasing comprehensive hardware and software solutions for software-driven mobility

At Japan Mobility Show 2025, Bosch publicly unveiled a by-wire brake actuator for the first time in Japan. In addition to a fully electronic brake-by-wire system that operates brake only with an electrical signal, Bosch also offers a hydraulic brake-by-wire system consisting of a by-wire brake actuator and an electronic stability program (ESP®). The system eliminates the need for a mechanical connection between the brake pedal and the brake system. The driver’s brake request is transmitted through redundant electrical signal lines from the electronic brake pedal to the by-wire brake actuator and the ESP®. In the event of a fault, both the by-wire brake actuator and the ESP® can build up the required brake pressure on all four-wheel brakes. Furthermore, because the driver's brake request is transmitted electronically, it helps to avoid the need for different

variants for right-hand and left-hand drive vehicles. This increases the degree of freedom for the position of the actuator and opens new possibilities for vehicle interior design. The hydraulic brake-by-wire system is based on proven technology in the market. Therefore, it offers the benefits of by-wire technology while retaining a highly reliable, lightweight, and energy-efficient features. Bosch's by-wire brake system is expected to be featured in production vehicles for an Asian automaker in the beginning of 2026.

Vehicle motion management is a comprehensive software solution for vehicle motion that allows integrated control of multiple actuators such as brakes, steering, powertrain, and suspension. Bosch has already realized a technology that enables [personalized driving](#) tailored to individual preferences and driving scenarios based on the driver's input. Building on this, Bosch has taken this technology a step further through cross-division collaboration. Bosch is developing a new function where the software automatically recognizes the driver's preferred driving style based on facial recognition and sets the optimal driving mode accordingly. This system uses highly accurate facial recognition technology and AI-based driving analysis to identify individual drivers. Once identified, the system recognizes the driver's past driving data, configuration history, and behavioural patterns while driving. The vehicle automatically suggests a driving mode that matches drivers' mood, intentions, and constantly learned driving style.

Bosch has also developed a new easy turn assist function using the same vehicle motion management software. This function enables the car to achieve a tighter turning circle when navigating turns such as U-turns or tight curves by lightly applying the brake to the inside tires and adjusting the motor power distribution. With the easy turn assist function, drivers will be able to steer easily, eliminating the need to repeatedly turn the steering wheel back and forth and enabling a smooth drive-off from tight parking spaces.

Bosch's manufacturing capability in Japan: shaping the future of mobility

Bosch's strengths lie in software-driven development, intelligent hardware that enables it, and manufacturing. Bosch is scheduled to start production of its 10th generation ESP® at its Tochigi plant from early 2026 and sequentially proceed with its supply to Japanese automakers. In preparation for this, Bosch completed the installation of the ESP® production line in October 2025 and is currently making final preparations for the production launch.

Bosch will continue to lead the era of software-driven mobility by fully leveraging its strengths in both cutting-edge software development and the intelligent hardware to bring it to life.

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Bosch in Japan is currently represented in the country by Bosch Corporation, Bosch Rexroth Corporation and other affiliates. Bosch Corporation is responsible for the development, manufacturing, sales and services of automotive original equipment, automotive aftermarket products and power tools. Bosch Engineering K.K. provides engineering services, such as development and application for automotive systems. ETAS K.K. develops and provides engineering of development support tools of electrical control units. Bosch Rexroth Corporation develops and manufactures hydraulics, FA module components and other systems which contribute to industrial technologies. In 2024, Bosch Japan achieved sales to third parties of some 428 billion yen and employed approximately 6,300 associates.

Additional information is available online at

<http://www.bosch.co.jp> Bosch Japan Website (Japanese)

<https://twitter.com/BoschJapan> Bosch Japan X (Japanese)

<https://www.facebook.com/bosch.co.jp> Bosch Japan Facebook (Japanese and English)

<https://www.youtube.com/boschjp> Bosch Japan Youtube (Japanese)

<https://www.linkedin.com/company/bosch-japan/> Bosch Japan LinkedIn (Japanese)

The Bosch Group is a leading global supplier of technology and services. It employs roughly 418,000 associates worldwide (as of December 31, 2024). The company generated sales of 90.3 billion euros in 2024. Its operations are divided into four business sectors: Mobility, Industrial Technology, Consumer Goods, and Energy and Building Technology. With its business activities, the company aims to use technology to help shape universal trends such as automation, electrification, digitalization, connectivity, and an orientation to sustainability. In this context, Bosch's broad diversification across regions and industries strengthens its innovativeness and robustness. Bosch uses its proven expertise in sensor technology, software, and services to offer customers cross-domain solutions from a single source. It also applies its expertise in connectivity and artificial intelligence in order to develop and manufacture user-friendly, sustainable products. With technology that is "Invented for life," Bosch wants to help improve quality of life and conserve natural resources. The Bosch Group comprises Robert Bosch GmbH and its roughly 490 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. Bosch's innovative strength is key to the company's further development. At 136 locations across the globe, Bosch employs some 87,000 associates in research and development.

The company was set up in Stuttgart in 1886 by Robert Bosch (1861–1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-four percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a limited liability company with a charitable purpose. The remaining shares are held by Robert Bosch GmbH and by a company owned by the Bosch family. The majority of voting rights are held by Robert Bosch Industrietreuhand KG. It is entrusted with the task of safeguarding the company's long-term existence and in particular its financial independence – in line with the mission handed down in the will of the company's founder, Robert Bosch.

Additional information is available online at www.bosch.com, www.bosch-press.com.

Note: one Euro = 163.8354 JPY