



PRESS RELEASE

More safety, comfort, and driving dynamics: Bosch and Pirelli signed a development cooperation for intelligent tyre technology

The cooperation will combine Bosch's expertise in system-level hardware, software, with MEMS sensors and Pirelli's Cyber Tyre technologies, algorithms, modeling and in-tyre sensors

Abstatt, Stuttgart, 10th September 2024 – Pirelli and Bosch have signed a joint development agreement. It aims at jointly creating new software-based solutions and driving functions thanks to sensors integrated into tyres, also known as in-tyre sensors. For drivers, this means greater safety, comfort, and sustainability, as well as improved driving dynamics. Bosch and Pirelli share the vision of working long term and have the intention to explore together enhanced tyre signal computing logic as potential input for enhanced vehicle dynamic controllers.

Pirelli Cyber Tyre is the world's first system based on tyres with integrated sensors that collect data and transmit it to the vehicle to be processed in real time. Bosch has already developed an ESP application specifically adapted to Pirelli tyres in an initial joint project with the hypercar manufacturer Pagani Automobili. The "Pirelli Cyber Tyre" technology on the Pagani Utopia Roadster transmits key tyre information to the ESP control unit. This enables optimal use of the individual properties and performance of the tyres, providing enhanced greatest safety and tailored driving conditions.

As a global supplier of technology and services, Bosch contributes its system-level hardware and software expertise to the development cooperation. Bosch is also a leader in MEMS (Micro-Electro-Mechanical Systems) sensor technology and develops and manufactures tyre pressure sensors using the "Bluetooth Low Energy" (BLE) standard. By merging this expertise with Pirelli's in-tyre devices technologies – both hardware and software, algorithms, and tyre modeling, it will be possible to collect, process, and transmit real-time tyre data to provide parameters for the vehicle's electronic control system, using BLE with very low power consumption. Pirelli and Bosch now aim to exploit Bosch MEMS technology for in-tyre applications.

Press photos and infocharts are available on the Bosch Media Service at www.bosch-press.com

About Bosch

Mobility is the largest Bosch Group business sector. In 2023, its sales came to 56.2 billion euros, or just under 60 percent of total Group sales. This makes the Bosch Group one of the leading mobility suppliers. Bosch Mobility pursues a vision of mobility that is safe, sustainable, and exciting. For its customers, the outcome is integrated mobility solutions.

The business sector's main areas of activity are electrification, software and services, semiconductors and sensors, vehicle computers, advanced driver assistance systems, systems for vehicle dynamics control, repair-shop concepts, as well as technology and services for the automotive aftermarket. Bosch is synonymous with important automotive innovations, such as electronic engine management, the ESP anti-skid system, and common-rail diesel technology.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 429,000 associates worldwide (as of December 31, 2023). The company generated sales of 91.6 billion euros in 2023. 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 470 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 90,000 associates in research and development, of which nearly 48,000 are software engineers.

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

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About Pirelli

Established in Milan in 1872, Pirelli is a major player in the tyre industry and the only global manufacturer focused solely on the Consumer tyre market, which includes tyres for cars, motorcycles and bicycles. With a distinctive positioning in High Value tyres, the Group stands as a global brand known for its cutting-edge technology, high-end production excellence and passion for innovation that draws heavily on its Italian roots.

With 18 production plants in 12 countries, around 31,000 employees, a turnover of about €6.65 billion in 2023, Pirelli has a commercial presence in over 160 countries.

Pirelli's technological excellence is also nourished by the innovation and competencies derived from sporting competitions, in which it has been active for over 115 years. At present, the company participates in over 350 car and motorcycle sport events and since 2011 it has been the Global Tyre Partner to the Formula One™ World Championship.

Thanks to a strong commitment in research and development, Pirelli has over 2,000 people engaged in R&D located at its Milan headquarters and 12 local technology centers and a portfolio of 6,000 patents.

In 2023, Pirelli's investment in R&D equaled 5,4% of its revenues from High Value products.

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