Press release

Bosch puts 5G machines in pole position

New communications standard is a key building block for the factory of the future

November 26, 2019
PI 9367 RB Cn/BT

- 5G will be a competitive factor in manufacturing
- Bosch Rexroth's first 5G-capable automation platform ensures comprehensive connectivity in factories
- Bosch extends its leadership role in Industry 4.0

Stuttgart, Germany – 5G is coming. The new communications standard accelerates the internet of things and boosts Industry 4.0. Control systems and sensors of the kind built into facilities, machinery, and logistics chains stand to gain from this fast, reliable real-time wireless data transfer. Preparing machines for state-of-the-art communication involves making them 5G-capable. Now Bosch has the solution: Bosch Rexroth's new ctrlX AUTOMATION control technology comes with 5G built in and can connect a wide range of industrial devices with the new communications standard. ctrlX AUTOMATION will be showcased at the SPS trade fair in Nuremberg.

Bosch opens the door to a new industrial age

"5G is set to turbocharge manufacturing. Our new 5G-capable automation platform lays the groundwork and opens the door to a new industrial age," says Rolf Najork, the member of the Bosch board of management responsible for industrial technology. 5G is the first communications standard designed to enable connectivity for people as well as for the internet of things. The new standard has impressive characteristics: it is up to 20 times faster than 4G, transfers data virtually instantaneously with a latency of one millisecond, and is up to 99.9999 percent reliable – making the receipt of a "digital shipment" as certain as with transmission through a wire.[1] "5G is a revolution and an important building block for the factory of the future," Najork says. Engineers and designers now

[1] See Roland Berger: "Erfolgsfaktor 5G. Innovation und Vielfalt für die nächste Stufe der Digitalisierung", p. 21 f. https://bit.ly/2ZnRlve (German only)

Robert Bosch GmbH
Postfach 10 60 50
70049 Stuttgart

E-mail: Dennis.Christmann@de.bosch.com
Phone +49 711 811 58178
Twitter @BoschPresse

Corporate Department
Communications & Governmental Affairs
Executive Vice President: Prof. Christof Ehrhart
www.bosch-press.com

face the challenges of integrating 5G into their machines and products. Bosch is introducing the solution that meets their needs: the new automation platform's hardware can be fitted with a 5G module. The operating system and software for ctrlX AUTOMATION are 5G-capable from the outset and support rapid commissioning. Retrofit solutions are also available for adding the new technology to existing machinery. Bosch Rexroth's new automation platform is scheduled to have its market launch in 2020.

5G will be a competitive factor for connected industry

Experts estimate that there will be up to 70 billion connected devices worldwide by 2025.[2] Many of them will be in manufacturing, meaning that 5G will become a competitive factor. The new communications standard will enable applications that require high-power, extremely reliable wireless connections to be integrated securely and efficiently into manufacturing facilities. These include mobile robotics, autonomous transport vehicles, and human-machine interactions. For instance, workers wearing augmented reality glasses can access additional information in their field of vision, optimizing how they monitor and maintain machinery. Combining tasks in the virtual world with those in the real world calls for real-time data flows. And that's what 5G promises. "This new form of communication eclipses everything we've had until now. 5G is the first wireless protocol to truly meet the needs of the manufacturing industry," Najork says.

Bosch takes on leadership role in Industry 4.0 and 5G

Bosch is developing the factory of the future. In this endeavor, the company is relying on Industry 4.0. The company first tests and validates products in-house before they are available on the market. Bosch is taking this approach with 5G, too. The company presented its first 5G-capable autonomous transport system, ActiveShuttle, at the Hannover Messe. To support the further development of its factories, Bosch has applied to the German Federal Network Agency for 5G licenses with which to set up local campus networks. Moreover, Bosch has taken on the chair of the global 5G Alliance for Connected Industries and Automation (5G-ACIA) with the aim of shaping the new mobile standard so that it meets the needs of the manufacturing industry from the outset.

[2] See Roland Berger: "Erfolgsfaktor 5G. Innovation und Vielfalt für die nächste Stufe der Digitalisierung", p. 11 https://bit.ly/2ZnRlve (German only)

Press photos: #1360997, #2826798, #2826800, #1360999, #2718989

Contact person for press inquiries:

Dennis Christmann

Phone: +49 711 811-58178

Twitter: @BoschPresse

The Bosch Group is a leading global supplier of technology and services. It employs roughly 410,000 associates worldwide (as of December 31, 2018). The company generated sales of 78.5 billion euros in 2018. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 460 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. The basis for the company's future growth is its innovative strength. At nearly 130 locations across the globe, Bosch employs some 68,700 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-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

Additional information is available online at www.bosch.com, www.iot.bosch.com, www.bosch-press.com, www.twitter.com/BoschPress.